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# Taxation in the later Roman Empire

*a study on the character of the late antique economy*

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*vix ego Saturno quemquam regnante videbam,  
cuius non animo dulcia lucra forent.*

(Ovid, *Fasti*, I.193-194)

*Clio hield, in haar hoedanigheid van minister van Historie,  
haar papyrusrol altijd maar een klein stukje uitgetrokken... ja,  
in die tijd moest het grootste gedeelte van de geschiedenis  
zich nog voor ons ontrollen... Nu we alweer twee  
millennia verder zijn, zie ik haar grote verdienste pas.*

(A.F.Th., *De Movo Tapes: een carrière als ander*, 443)

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## ∞ Preface ∞

‘We cannot make it more fun, but we can make things easier.’ (‘Leuker kunnen we het niet maken, wel makkelijker.’) This often-used credo of the Dutch tax department is to a large extent applicable to this work. Although it is not my intention to scare the reader off in this first paragraph, it is neither a secret that most people give treatises on fiscal subjects a wide berth - except when they can profit from new regulations - due to the complexity of the subject matter. Let us therefore focus on the second part of the slogan; and let us produce some order out of chaos.

Although the central issue of the present work is the later Roman system of taxation, the subject of my thesis has changed a number of times during the last two years. Without expanding on all this prematurely ended research, it is enough to say that there was always an overarching theme: the nature of the late antique economy. This has - obviously - everything to do with the omnipresent theme in late antique studies; the question that has terrorized late antique historians since the eighteenth century: the decline and fall of the Roman Empire (or - to rephrase it in more politically correct terms - the transformation/evolution of the late antique world). In the pages to come the development and workings of the tax system in the later Roman Empire will be investigated in the light of these grand themes.

To discuss this system of taxation in the best way possible, I have made - also at the (urgent) request of some tutors -

the choice to confine myself geographically to the best documented province of the Roman empire: Egypt, and in particular to the Oxyrhynchite nome in the middle of the fourth century. That this was no arbitrary act will become clear at a later stage in this work. As a result of that choice, papyri will be the most important source of evidence in the coming pages: ‘Durch diese [sc. the papyri] sind für die Erforschung der antiken Wirtschaft ganz neue Bedingungen geschaffen worden, was uns auch berechtigt mehr ins Einzelne gehende Fragen zu stellen als vor dem Erscheinen dieses sich ständig vermehrenden Materials.’<sup>1</sup> These words were written in the preface of Gunnar Mickwitz’s (1906-1939) important dissertation *Geld und Wirtschaft im Römischen Reich des vierten Jahrhunderts n. Chr.* in 1932. With this present study I would like to show that the old words of Mickwitz still hold truth: the ever-increasing number of published (and excavated) papyri enable scholars to ask new questions to the source material over and over again.

The work at hand has been built up like a three-stage rocket, getting more specific as parts are thrown off, or rather: as more pages are turned over. The introductory first chapter of the text will deal with the meta-historical level, focusing on the historiographical landscape of Late Antiquity and its economy to introduce the reader to one of the most vehement and long-lasting debates in ancient studies, i.e. the debate on the nature of the ancient economy (money

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<sup>1</sup> G. Mickwitz, *Geld und Wirtschaft im Römischen Reich des vierten Jahrhunderts n. Chr.* (Helsingfors: Centraltryckeri och bokbinderi aktiebolag, 1932) iii.

economy, natural economy or otherwise?). As we will see, this debate was called ‘an academic battleground’ by Keith Hopkins (1934-2004) in the introduction of the important volume *Trade in the ancient economy* for good reason.<sup>2</sup> In addition to this discussion on historiography, I will dedicate a paragraph to the used methodology and to the source material (that mainly consists of the so-called archive of Papnouthis and Dorotheus of which the bulk was published in the 48<sup>th</sup> volume of *The Oxyrhynchus papyri-series*<sup>3</sup>).

The remaining two-stage rocket will leave the meta-historical level behind, increasing the degree of concreteness of the subject matter. The second part of the text will focus on the empire as a whole, whilst the third - and last - will zoom in on a particular time and place within late antique history: the Oxyrhynchite nome in the middle of the fourth century. The system of taxation in the later Roman Empire will be discussed in the former part, dealing with questions like: What were the bases of taxation? How was the collection organised? What were the most important

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<sup>2</sup> K. Hopkins, ‘Introduction’, in: P. Garnsey, K. Hopkins and C.R. Whittaker (edd.), *Trade in the ancient economy* (London: Chatto & Windus, 1983) ix: ‘The ancient economy is an academic battleground. The contestants campaign under various colours - apologists, Marxists, modernizers, primitivists. Since academics are individuals, well-disciplined but not all marching to the same music, these categories are neither mutually exclusive, nor internally united. Even within schools, there are sects.’

<sup>3</sup> Cf. G. Ruffini, ‘Risk and administrative pressure in the archive of Dorotheus and Papnouthis’ [abstract of Giovanni Ruffini for his presentation at the 137<sup>th</sup> Annual Meeting of the American Philological Association in Montreal, Canada; January 5-8, 2006]: ‘Although this archive provides considerable insight into the period’s administrative and business practices, it has not received the attention it deserves.’



imperial changes in the system of taxation in the later Roman Empire? Can we attest alterations in the way taxes were levied - i.e. was there a change from levying in money to levying in kind or vice versa?

The central issue at stake in the last chapter of the main text will be the aforementioned archive of Papnuthis and Dorotheus - reaching the most specific level possible in writing ancient history by using papyrological evidence.<sup>4</sup> Papnuthis and Dorotheus were two brothers living in fourth-century Oxyrhynchus working as assistants (*βοηθοί*) to some of the elite families of the city. The predominant part of their function was concerned with the collection of taxes, both in money and in kind. Can we attest on the Oxyrhynchite 'micro level' the same developments as on the empire-wide macro level? What can we say about the nature of the late antique economy on the basis of this case study? Since it is very difficult to judge to what extent Oxyrhynchus should be considered as some sort of an 'index', we will also briefly compare the Oxyrhynchite situation with the fiscal state of affairs in the village of Karanis in the Arsinoite nome - again on the basis of papyrological evidence.

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<sup>4</sup> I am somewhat reserved applying the term 'micro history' to ancient history, simply because - even in a case like this - the information we have is inadequate to speak of micro history. I do not pretend to be a Roman Carlo Ginzburg or Emmanuel le Roy Ladurie, who reached great micro-historical heights with their respective *Il formaggio e i vermi: il cosmo di un mugnaio del '500* (Turin: Einaudi, 1976) and *Montaillou, village occitan de 1294 à 1324* (Paris: Gallimard, 1975). As a matter of convenience I will sometimes adopt the term 'micro level', as opposed to 'meta level' or 'macro level', but without referring to the historiographical meaning of the term.

Now it only remains to formulate our main question: What can we say about the nature of the late antique economy on the basis of the workings of the later Roman system of taxation in general, and the situation in mid-fourth century Oxyrhynchus - as reflected in the archive of Papnuthis and Dorotheus - in particular?

At this point, I would like to thank my tutors Professor L. de Ligt and Professor K.A. Worp for their help and patience. They showed me that - even when it is almost impossible to see the wood for the trees - structures and peculiarities are not as indistinguishable as I thought they were at first sight. Furthermore I would like to thank Kim Beerden, Robin van den Broek, Paula Klumpers, Frits Naerebout, Rens Tacoma, Yalçın Yüklér and my fratres et sorores (ex-)MPhilores for their valuable suggestions and interesting discussions on varying topics related to (ancient) history or otherwise. I would also like to thank Gunn Mari Haaland and Andrea Alessandro Gasparini (University of Oslo) for providing the image of *P. Oslo III 88*, and Professor Roger S. Bagnall (Columbia University; and Director of the Institute for the Study of the Ancient World, New York University) for examining the above-mentioned Oslo-papyrus and verifying my suspicions against J.C. Shelton.

All responsibility for the shortcomings and the views expressed, rests with the author. *Ex his igitur quae rettulimus, iam futuris ut arbitrator designates...*<sup>5</sup>

Sander Boek

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<sup>5</sup> *De rebus bellicis* I.10.1.



## Approaching the ancient economy

Before we will concentrate on the actual subject of this thesis - as is unambiguously indicated in the main title - it is necessary to take a closer look at the subtitle of the present work: 'a study on the character of the late antique economy'. Clearly, this subtitle presupposes the existence of a debate on the nature of that economy. And so there is: the discussion on the character of the ancient economy is one of the most vehement debates in the field of ancient history, having occupied the minds of generations of scholars and still doing so. Therefore, I consider it necessary to elaborate on the way scholars have looked at this historical controversy over the last 250 years, before discussing the later Roman system of taxation and - by means of that system - late antique economy in general.

Roughly, there are two completely different kinds of late antique historians - by which I mean modern scholars specialised in Late Antiquity, not men from antiquity itself writing about (near-)contemporary events. The first subspecies is still closely related to the nineteenth-century German school of historicism, mainly emphasizing the role of the state in history and focusing on the elite members of society. Edward Gibbon (1737-1794) is being considered as one of the precursors of this movement because he 'placed

the Roman state in the foreground of his study.<sup>6</sup> In the twentieth century, famous late antique historians as J.B. Bury, E. Stein, A.H.M. Jones and A. Demandt have used this approach.<sup>7</sup>

A radically new approach was adopted by Peter Brown, when he published *The world of Late Antiquity* in 1971.<sup>8</sup> In his work he counterbalanced the cultural negligence of historicism by emphasizing the role of culture and religion in ancient society and expanded the chronological timeframe of Late Antiquity from the reign of Marcus Aurelius to the eighth century (whereas most historicists started their account with the accession of Diocletian in 284 and ended it with the death of Justinian). In the meantime, there has even appeared a 'first attempt to collect the harvest of the Brownian approach'<sup>9</sup> with the publication of the encyclopaedic work *Late Antiquity. A guide to the postclassical world* in 1999 - although it was not the intention of the

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<sup>6</sup> S. Mitchell, *A history of the Later Roman Empire AD 284-641: the transformation of the ancient world* (Malden: Blackwell Publishing, 2007) 6.

<sup>7</sup> J.B. Bury, *History of the later Roman Empire from the death of Theodosius I to the death of Justinian (A.D.395 to A.D.565)* (London: Macmillan, 1923); E. Stein, *Geschichte des spätrömischen Reiches* (Vienna: Seidel, 1928); idem, *Histoire du Bas-Empire: De la disparition de l'Empire d'Occident à la mort de Justinien (476-565)* (Paris: Desclée De Brouwer, 1949); A.H.M. Jones, *The later Roman empire, 284-602: a social economic and administrative survey* (Oxford: Blackwell, 1964); A. Demandt, *Die Spätantike: römische Geschichte von Diocletian bis Justinian, 284-565 n.Chr.* (Munich: Verlag C.H. Beck, 1989).

<sup>8</sup> P. Brown, *The world of Late Antiquity: from Marcus Aurelius to Muhammad* (London: Thames and Hudson, 1971).

<sup>9</sup> Mitchell, *A history of the Later Roman Empire*, 7 (op. cit. n. 6).

editors (of whom Peter Brown himself was one) to create an ‘all-including guide’.<sup>10</sup>

However, thanks to the nature of our subject matter - economics has simply been related more often to the role of the state than to the role of culture in society - this thesis will historiographically join in with the first ‘subspecies’ of late antique historians (although I will examine the influences of taxation on society in the chapter on Oxyrhynchus in the mid-fourth century). Hence, I will particularly emphasize the ‘traditional’ way of writing late antique history in the overview below. In the concluding paragraphs of this chapter I will dedicate a few words to the methodology used and the role of papyrology in writing ancient history.

### 1.1 *Late Antiquity: the Gibbonian paradigm*

In the 1970s Ramsay MacMullen described, in the preface of one of his books, the differences between the Principate and the Dominate as follows: ‘He [sc. the historian] emerges into a gradually clearing light, but in a different country - as if he had entered the depths of Monte Bianco and discovered an exit from Mont Blanc.’<sup>11</sup> So, the source material on the Italian side of the metaphorical Alp (covering the period of the Principate) shows a picture completely different from the French side of the mountain, starting with the reign of

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<sup>10</sup> G.W. Bowersock, P. Brown and O. Grabar (edd.), *Late Antiquity. A Guide to the Postclassical World* (Cambridge [MA]: Harvard University Press, 1999) xii.

<sup>11</sup> R. MacMullen, *Roman governments response to crisis AD 235-337* (New Haven/London: Yale University Press, 1976) vii.

Diocletian in 284. This vision is nothing new under the sun. In a famous article Rostovtzev wrote: 'Cicero would not have recognised his compatriots if by chance he had come to life again in the Rome of the early popes and the late emperors, though some of them still wrote Ciceronian Latin'.<sup>12</sup> The same conclusion can be found in other great works on antiquity (e.g. K. Bücher, K. Kautsky, M. Weber and J. Salvioli) all recalling the Gibbonian paradigm of the 'decline and fall of the Roman Empire'.

The later Roman Empire was without any doubt a period of transformation, but the metaphor of MacMullen does not constitute the alienating effect as might appear at first sight. The Mont Blanc Tunnel connects the French village Chamonix with the French-speaking Italian village of Courmayeur (Valle d'Aosta). Theoretically one has entered a different country, but in practice there has not changed that much. The later Roman Empire has been considered in this way more and more over the last decades.<sup>13</sup> It is undeniable that there were differences between before and after, but it is not hard to list similarities between the two periods either: the emperor is still the head of state, the economy is still predominantly based on agriculture, the Roman army keeps playing an important role in Late Antiquity, etc. However, the Gibbonian impression of a decaying empire has firmly taken root in the historiographical landscape of the later

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<sup>12</sup> M. Rostovtzeff, 'The decay of the ancient world and its economic explanations', *The Economic History Review* 2.2 (1930) 199.

<sup>13</sup> E.g. P. Garnsey and C. Humfress, *The evolution of the late antique world* (Cambridge: Orchard Academic, 2001); J.-M. Carrié and A. Rousselle, *L'Empire romain en mutation des Sévères à Constantin 192-337* (Paris: Éditions du Seuil, 1999).

Roman Empire<sup>14</sup> (and some scholars still prefer to clutch to the ‘decline and fall’-theory<sup>15</sup>).

The first volume of the *History of the Decline and Fall of the Roman Empire* was published on 16 February 1776. Less than a month later, on March 9, another important work appeared: the magnum opus of the Scottish ‘economist’ Adam Smith (1723-1790) *An inquiry into the nature and causes of the wealth of nations* (better known by its last four words), the traditional point of departure of political economy as a discipline. Smith and Gibbon were close friends, but - unfortunately for everyone who is interested in the combination between late antiquity and economy - hardly influenced each other’s works.<sup>16</sup> Gibbon tried to explain the disintegration of the empire mainly by looking at the barbarian invasions and the spread of Christianity, without having much eye for economic (or military) factors, which prevail in modern research on the later Roman Empire.<sup>17</sup>

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<sup>14</sup> According to Jairus Banaji we owe this presence of the Gibbonian paradigm within modern historiography to the strength of positivism and to the powerful influence of Max Weber: J. Banaji, *Agrarian change in Late Antiquity: gold, labour and aristocratic dominance* (Oxford: Oxford University Press, 2001) vii-viii; ‘primitivist and Weberian legacies remain pervasive, and what is surprising is how rarely they have been challenged.’ [original emphasis].

<sup>15</sup> ‘Decline and fall’-titles are still very popular, e.g. the recent publications: N. Faulkner, *The decline and fall of Roman Britain* (Stroud: Tempus, 2004); and J.H.W.G. Liebeschuetz, *The decline and fall of the Roman city* (Oxford: Oxford University Press, 2001).

<sup>16</sup> H. Trevor-Roper, ‘Introduction’, in: E. Gibbon, *The decline and fall of the Roman Empire*, volume I (London: Everyman’s Library, 1993) lxxix-lxxx.

<sup>17</sup> E.g. R. MacMullen, *Corruption and the decline of Rome* (New Haven/London: Yale University Press, 1988); T.S. Burns, *Barbarians within the gates of Rome: a study of Roman military policy and the barbarians, ca. 375-425 A.D.* (Bloomington: Indiana University Press, 1994); M. J.

This explains the fact why in over 3,750 pages of Gibbon's work the word 'economy' appears only 48 times; often in an isolated position without any economic context. So, it is no use challenging Gibbon *an sich* when investigating the late antique economy, but it is of course possible - and tempting - to challenge the paradigm Gibbon has left. The question why the Roman Empire 'fell' has still not been solved; on the contrary: the ever-increasing number of answers to this (almost?) unsolvable problem only stimulates the debate. Although this thesis is strictly speaking also part of that debate, it is not my intention to elaborate on this endless discussion about the decline and fall of the Roman Empire. I will focus on the later Roman system of taxation and its implications for the late antique economy in general: the 'decline and fall'-debate will therefore not play the first fiddle in the pages to come.

## 1.2 *The nineteenth century: Bücher versus Meyer?*

Ancient history and economy only met for the first time in 1817 with the publication of August Böckh's *Die Staatshaushaltung der Athener*.<sup>18</sup> However, 'economic questions entered the mainstream of classical scholarship much later',<sup>19</sup>

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Nicasie, *Twilight of empire: the Roman army from the reign of Diocletian until the battle of Adrianople* (Amsterdam: Thesis Publishers, 1997). See also the inaugural speech of: L.V. Rutgers, *Ziel en zaligheid: de Late Oudheid vanuit godsdiensthistorisch en archeologisch perspectief* (Amsterdam: Edita, 2004).

<sup>18</sup> A. Böckh, *Die Staatshaushaltung der Athener: mit 21 Inschriften* (Berlin: Realbuchhandlung, 1817).

<sup>19</sup> I. Morris, 'Foreword [to the updated edition]', in: M.I. Finley, *The ancient economy* (Berkeley: University of California Press, 1999<sup>3</sup>) ix.



in the second half of the nineteenth-century to be precise, and geographically exactly where one may expect such a topic to gain academic ground: in Germany.

During the 1860s two German economists introduced two concepts into their writings, which are still at the centre of debate. Johann Karl Rodbertus (1805-1875) described the ancient economy as an ‘Oikewirtschaft’: an economic system where goods are produced and consumed by the same households (closed household economy), thereby emphasizing the ancient ideal of self-sufficiency already promoted by Aristotle and Plato.<sup>20</sup> Another German economist, Bruno Hildebrand (1812-1878), created an evolutionistic system of economic development consisting of three stages. He was looking for a universal economic stage scheme and ‘meinte sie in dem Verteilungsmechanismus der Waren zu finden.’<sup>21</sup> His tripartition included first of all

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<sup>20</sup> J.K. Rodbertus, ‘Zur Geschichte der römischen Tributsteuern seit Augustus’, *Jahrbücher für Nationalökonomie und Statistik* 4 (1865) 341-427, cited in Mickwitz, *Geld und Wirtschaft*, 1 (op. cit. n. 1): ‘Unter der Einschränkung, dass die Wirklichkeit niemals das Ideal völlig erreicht, war der Oikos die wirklich bestehende Grundlage, der lebendige, pulsierende Elementarorganismus jener berühmten antiken Staatenart, welche die Alten selbst als ‘Polis’ bezeichneten.’ See also: R. Mayhew, ‘Aristotle on the self-sufficiency of the city’, *History of political thought* 16.4 (1995) 488-502; P. Garnsey, *Famine and food supply in the Graeco-Roman world: responses to risk and crisis* (Cambridge: Cambridge University Press, 1988) 43-68; L. de Ligt, ‘Twintig jaar economische geschiedschrijving van de Oudheid’, *NEHA-bulletin: tijdschrift voor de economische geschiedenis in Nederland* 8.1 (1994) 6-8.

<sup>21</sup> Mickwitz, *Geld und Wirtschaft*, 2 (op. cit. n. 1), citing Hildebrand: ‘Entweder setzt man Güter unmittelbar gegen Güter um, oder man bedient sich des Tauschmittels der edlen Metalle, des Geldes, oder endlich man setzt Güter gegen das Versprechen um, in Zukunft,

‘Naturalwirtschaft’ (natural or barter economy)<sup>22</sup> - as the most primitive form of economic development - to be succeeded by ‘Geldwirtschaft’ (money economy) and - at the top of economic development - ‘Kreditwirtschaft’ (credit economy).<sup>23</sup> As a consequence of his evolutionistic logic, ancient economy was put under the header ‘Naturalwirtschaft’.

Many historians quickly accepted Hildebrand’s division of economic gradations, but a competing model - incorporating the ideas of Rodbertus - was ‘invented’ by Karl Bücher (1847-1930) in the 1890s.<sup>24</sup> Like Hildebrand’s subdivision, Bücher’s system was highly evolutionistic. According to Bücher the ancient economy was characterised by Rodbertusian small-scale, household economies (‘geschlossene Hauswirtschaft’) ‘aimed at self-sufficiency and engaged only in very limited exchanges with other households’.<sup>25</sup> The economy of the Middle Ages could be characterised by the larger city economies (‘Stadtwirtschaft’), and as time proceeded the

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denselben oder einen gleichen Werth zurückzuerstatten d.h. gegen Credit.’

<sup>22</sup> See also: A. Dopsch, *Naturalwirtschaft und Geldwirtschaft in der Weltgeschichte* (Vienna: Verlag von L.W. Seidel & Sohn, 1930) 1-23.

<sup>23</sup> B. Hildebrand, ‘Natural-, Geld- und Kreditwirtschaft’, *Jahrbücher für Nationalökonomie und Statistik* 2 (1864) 1-24. Cf. K. Marx, *Das Kapital: Kritik der politischen Ökonomie. 2: Der Zirkulationsprozess des Kapitals* (Karl Marx, *Friedrich Engels Gesamtausgabe* 12.1; Berlin: Akademie Verlag, 2005) 90-91 [originally published in 1885].

<sup>24</sup> K. Bücher, *Die Entstehung der Volkswirtschaft: Vorträge und Versuche* (Tübingen: Verlag der H. Laupp’schen buchhandlung, 1893). However, this system was earlier described by G. Schönberg, *Zur wirtschaftlichen Bedeutung des deutschen Zunftwesens im Mittelalter* (Berlin: Mittler und Sohn, 1868).

<sup>25</sup> Morris, ‘Foreword’, ix (*op. cit.* n. 19).

economies of the modern world were to be called national economies ('Volkswirtschaft').<sup>26</sup>

The consequences of this simplistic representation of economic development made themselves felt soon after its publication. The fiercest protest came from Eduard Meyer (1855-1930), who accused Bücher of primitivism.<sup>27</sup> Meyer claimed that 'das siebente und sechste Jahrhundert in der griechischer Geschichte entspricht in der Entwicklung der Neuzeit dem vierzehnten und fünfzehnten Jahrhundert n. Chr.: das fünfte dem sechzehnten.'<sup>28</sup> In contrast to the primitivism of Bücher, Meyer described the ancient economy, as it were a full modern capitalist economy; the 'Bücher-Meyer controversy' (also referred to as: 'primitivists versus modernists'-debate or 'the *oikos*-controversy'<sup>29</sup>) was born.<sup>30</sup>

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<sup>26</sup> H.W. Pleket, 'Wirtschaft', in: F. Vittinghoff (ed.), *Europäische Wirtschafts- und Sozialgeschichte in der römischen Kaiserzeit (Handbuch der europäischen Wirtschafts- und Sozialgeschichte; Bd. 1.)* (Stuttgart: Klett-Clotta, 1990) 33-35.

<sup>27</sup> H. Schneider, 'Die Bücher-Meyer Kontroverse', in: W.M. Calder and A. Demandt (edd.), *Eduard Meyer: Leben und Leistung eines Universalhistorikers* (Leiden: Brill, 1990) 417-445; H. Derks, '“The Ancient Economy”: the problem and the fraud', *The European Legacy: toward new paradigms* 7.5 (2002) 599-602; M. Austin and P. Vidal-Naquet, *Economic and social history of ancient Greece: an introduction* (London: B.T. Batsford, 1977) 3-35.

<sup>28</sup> E. Meyer, 'Die wirtschaftliche Entwicklung des Altertums', in: idem, *Kleine Schriften zur Geschichtstheorie und zur wirtschaftlichen und politischen Geschichte des Altertums* (Halle: Niemeyer, 1910) 118-119 [originally published in: *Jahrbücher für Nationalökonomie und Statistik* 64 (1895) 696-750].

<sup>29</sup> H. Derks, *Stad en land, markt en oikos* (Amsterdam, 1986) 413-455 [unpublished dissertation].

<sup>30</sup> Five important contributions to this controversy written by the main authors (Karl Bücher, Eduard Meyer and Julius Beloch) were reprinted

However, although Bücher and Meyer held fundamentally different views on the characterization of the ancient economy in general, Meyer brought his opinion round on the economy of the later Roman Empire. Contrary to his views on the Greek and early Roman economies, he characterised the late antique economy (from the third century onwards) as if it was a natural economy. He even magnanimously agreed with Bücher - in a footnote - that monetary transactions came to a halt during the reign of Diocletian ‘und das Geld wieder zur Ware wird’.<sup>31</sup> This widely shared view could be persisted for a long time, since it was not challenged by any (classical) scholar until the 1930s: the later Roman economy was considered as the prelude to the early medieval economy, which was depicted as predominantly ‘natural’.

### 1.3 *Medievalists on Late Antiquity*

Les économistes allemands ont inventé, pour caractériser les temps antérieurs à l’invention de la monnaie, l’expression de *Naturalwirtschaft*. (...) Ceux qui s’en servent dans cette (...) acception n’entendent évidemment pas lui donner un sens absolu. Aucun d’eux n’ignore en effet que depuis son invention la monnaie n’a plus cessé d’être en usage chez tous les peuples civilisés de

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in the volume: M.I. Finley (ed.), *The Bücher-Meyer controversy* (New York: Arno Press, 1979).

<sup>31</sup> Meyer, ‘Die wirtschaftliche Entwicklung des Altertums’, 158 n.2 (*op. cit.* n. 28); referring to: K. Bücher, ‘Die diokletianische Taxordnung vom Jahre 301’, *Zeitschrift für die gesamte Staatswissenschaft* 50 (1894) 189-219; 672-698. See also: L.M. Hartmann, *Geschichte Italiens im Mittelalter Band 1: Das italienische Königreich* (Gotha: Perthes, 1897) 365; E. Speck, *Handelsgeschichte des Altertums 3. Band, 2. Hälfte: B. Die Römer von 30 v. bis 476 n.Chr.* (Leipzig: F. Brandstetter, 1906) 932.

l'Occident. (...) Ce que l'on veut dire quand on désigne les débuts de Moyen Age comme une époque d'économie naturelle, c'est donc tout simplement que le numéraire y a été réduit à un rôle si minime qu'il en est presque négligeable.<sup>32</sup>

These wise words - written by the Belgian historian Henri Pirenne (1862-1935) - reveal that early medievalists took a fundamentally different perspective to the later Roman economy than late antique historians. They were convinced that 'money economy' and 'natural economy' were no mutually exclusive categories,<sup>33</sup> and took the view that the Roman monetary system did not cease to exist in the third century - and they were perfectly right in this. Although it is not my intention to discuss the theories proposed by economic medievalists at great length, I would like to dedicate some words to the ideas of Alfons Dopsch (1868-1953), since his work influenced Gunnar Mickwitz - perhaps the most important scholar for our subject - to a large extent.

The most important publication in this respect was an article published in 1928 by Dopsch: 'Frühmittelalterliche und spätantike Wirtschaft'.<sup>34</sup> This article is a keen attack on

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<sup>32</sup> H. Pirenne, *Histoire économique et sociale du Moyen Age* (Paris: Presses Universitaires de France, 1969<sup>2</sup>) 89-90 [originally published as: 'Le mouvement économique et social', in: H. Pirenne, G. Cohen and H. Focillon, *Histoire du Moyen Age, Tomé VIII: La civilisation occidentale au Moyen Age du XIe au milieu du XVe siècle* (Paris: Les Presses Universitaires de France, 1933) 1-189].

<sup>33</sup> Dopsch, *Naturalwirtschaft und Geldwirtschaft*, 2 (*op. cit.* n. 22).

<sup>34</sup> A. Dopsch, 'Frühmittelalterliche und spätantike Wirtschaft', in: idem (ed. by E. Patzelt), *Verfassungs- und Wirtschaftsgeschichte des Mittelalters: gesammelte Aufsätze* (Vienna: Verlag von L.W. Seidel & Sohn, 1928) 219-234.

the ideas of Bücher, although Dopsch traced these ideas back to Max Weber (1864-1920) and hence referred to the so-called 'Weberian legacy'.<sup>35</sup> In less than fifteen pages Dopsch sets forth his thoughts concerning the character of the late antique economy (and its relation to the early medieval economy) in such a convincing way that one can speak of - with some reservation - a Kuhnian paradigm shift.<sup>36</sup>

His most appreciable example is perhaps his discussion on the fieldfare (*turdus pilaris*) in Palladius' *Opus agriculturae*, thanks to the triviality of the subject matter.<sup>37</sup> According to Palladius it is very profitable to breed fieldfares outside the appropriate season, since the demand for the rare bird - which turns out to be a delicious meal - is higher than the supply in that time of the year: 'Aliud vero cubiculum turdos nutriat, qui, si alieno tempore saginentur, et voluptatem cibi et reditum maximum praestant, parcitati beneficium ministrante luxuria.'<sup>38</sup> It appears that the underlying economic thought has nothing to do with 'eigenwirtschaftliche Bedarfsdeckung', but is rather a serious

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<sup>35</sup> M. Weber, *Die römische Agrargeschichte in ihrer Bedeutung für das Staats- und Privatrecht* (Amsterdam: P. Schippers, 1962) 220-278 [originally published in 1891]; idem, 'Die sozialen Gründe des Untergangs der antiken Kultur', in: idem (edited by Marianne Weber), *Gesammelte Aufsätze zur Sozial- und Wirtschaftsgeschichte* (Tübingen: J.C.B. Mohr, 1988<sup>2</sup>) 289-311 [originally published in 1896]. Cf. J. Love, 'The character of the Roman agricultural estate in the light of Max Weber's economic sociology', *Chiron: Mitteilungen der Kommission für alte Geschichte und Epigraphik des Deutschen Archäologischen Instituts* 16 (1986) 99-146.

<sup>36</sup> T.S. Kuhn, *The structure of scientific revolutions* (Chicago: Chicago University Press, 1962).

<sup>37</sup> Dopsch, 'Frühmittelalterliche und spätantike Wirtschaft', 227-228 (*op. cit.* n. 34).

<sup>38</sup> Palladius, *Opus agriculturae*, I.26.1.

pursuit of profit.<sup>39</sup> However, despite this beautiful example, I am certainly not an unconditional advocate of the modernist approach, ascribing a capitalist mentality to the late antique economy - nor a primitivist.<sup>40</sup> The best results are, in my opinion, reached, when we judge every aspect of history on its own merits, without any form of historiographical parochialism.

Dopsch clearly revealed the error made by Weber and like-minded scholars: they excluded the possibility that a money economy and a natural economy could exist simultaneously. Although this was already demonstrated by Friedrich Preisigke (1856-1924) as early as 1910, the view gained only strength at the end of the 1920s.<sup>41</sup> Confirmed by the results of Dopsch and - to a lesser extent - Pirenne<sup>42</sup>, Gunnar Mickwitz demonstrated in his innovative dissertation that - on the basis of papyrological and numismatic evidence - a total relapse to a barter economy in the later Roman Empire was absolutely out of the question.<sup>43</sup> However, according to

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<sup>39</sup> Dopsch, 'Frühmittelalterliche und spätantike Wirtschaft', 228 (*op. cit.* n. 34).

<sup>40</sup> Cf. J. Andreau, 'Twenty years after Moses I. Finley's *The ancient economy*', in: W. Scheidel and S. von Reden (edd.), *The ancient economy* (New York: Routledge, 2002) 33-36 [originally published as: 'Vingt ans après L'économie antique de Moses I. Finley', *Annales: économies, sociétés, civilisations* 50.5 (1995) 947-960].

<sup>41</sup> F. Preisigke, *Girowesen im griechischen Ägypten enthaltend Korngiro, Geldgiro, Girobanknotariat mit Einschluss des Archivwesens: ein Beitrag zur Geschichte des Verwaltungsdienstes im Altertume* (Strasbourg: Von Schlesier & Schweikhardt, 1910).

<sup>42</sup> H. Pirenne, 'Un contraste économique: Mérovingiens et Carolingiens', *Revue belge de philologie et d'histoire* 2.2 (1923) 223-235.

<sup>43</sup> Mickwitz, *Geld und Wirtschaft*, 190 (*op. cit.* n. 1): 'Wenn wir die Ergebnisse unserer Untersuchung zusammenfassen, steht eines im Vordergrund: das Dogma von einer im vierten Jahrhundert

Mickwitz the state finances of the later Roman Empire formed an exception: while money economy prevailed in private life, business transactions and the Church; the state paid its employees ('Staatsdiener') in kind more and more often.<sup>44</sup> In short: Mickwitz saw the later Roman economy as a mixed economy, where monetary transactions and transactions in kind occurred side by side.

#### 1.4 *Moses Finley and Keith Hopkins: the further twentieth century*

Although the intellectual heritage of Gunnar Mickwitz can still be felt today, the historiographical discussion on the economic situation of the later Roman Empire proceeded. In the last fifty years, numerous scholars have occupied themselves with the Roman economy in very different ways, mainly due to the rise of the so-called auxiliary sciences and the incorporation of those sciences into historical research. This present study is, in fact, an example of this trend: trained as a historian, I have used the 'auxiliary science' of papyrology to emphasize and illustrate my points of view.

From the 1930s onwards, 'conventional history' produced some brilliant volumes on the workings of the (later) Roman economy, although the general tendency inclined to depict the economic situation of the empire after the crisis of the

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herrschenden Naturalwirtschaft kann nicht mehr aufrechterhalten werden.'

<sup>44</sup> Ibidem, 165-189 (*op. cit.* n. 1); cf. Dopsch, *Naturalwirtschaft und Geldwirtschaft*, 244 (*op. cit.* n. 22).



third century as a period of retraction.<sup>45</sup> However, the wake-up call took place in 1973 with the publication of Moses I. Finley's (1912-1986) *The ancient economy* based on the series of Sather lectures he gave at Berkeley in 1972.<sup>46</sup>

The main thesis of Finley's work is difficult to summarize in a few sentences, I will therefore cite the attempt of Ian Morris in the foreword to the most recent reissue of *The ancient economy*, who most aptly summarized the most important ideas of Finley: 'The core thesis of Finley's book is that we can build a coherent model of a single ancient economy, which sums up the important features of the whole Graeco-Roman Mediterranean from 1000 BC to AD 500 [...]. Finley recognised the diversity of economic arrangements within this huge slice of time and space, but as in all his work, insisted that 'we must concentrate on the dominant types, the characteristic mode of human behaviour'. The model had to be qualitative not quantitative, because the ancients kept no usable statistics [...]. Their failure to collect systematic numerical data is [...] a sign that the ancients did not see economic activity as a distinct element of life. In short, the ancient economy was embedded.'<sup>47</sup>

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<sup>45</sup> In particular, the vast body of work on the (later) Roman economy by A.H.M. Jones (1904-1970) should be mentioned here: Jones, *The later Roman Empire*, 284-602 (*op. cit.* n. 7); idem (ed. by P.A. Brunt), *The Roman economy: studies in ancient economic and administrative history* (Oxford: Basil Blackwell, 1974). On the importance of Jones, see: D.M. Gwynn (edd.), *A.H.M. Jones and the Later Roman Empire* (Leiden: Brill, 2008).

<sup>46</sup> Finley, *The ancient economy* (*op. cit.* n. 19).

<sup>47</sup> Morris, 'Foreword', xix-xx (*op. cit.* n. 19); Finley, *The ancient economy*, 29 (*op. cit.* n. 19). Cf. Derks, "The Ancient Economy": the problem and the fraud', 600 (*op. cit.* n. 27).

In this summary (and particularly in the last sentence), we clearly see the influence of substantivism (first proposed by Finley's teacher Karl Polanyi (1886-1964) in 1944<sup>48</sup>), in which economics is not considered as the rational process of decision-making on issues of production, consumption and distribution of services and goods, but as the study of how humans make a living from their social and natural environment. This substantivist approach to economics was to a large extent based on anthropological ideas. Another important idea prevailing in Finley's perception of the ancient economy was that self-sufficiency (*αὐτάρκεια*) was one of its principal aims, and since agriculture was the single most important source of wealth, trade made only a small contribution to the gross product of the Roman Empire.

In fact, Finley's substantivist approach was a radically new way of looking to the ancient economy. As a result of Finley's publications the historiographical landscape was thoroughly reorganized: 'Those whom he had not convinced opposed him, and tried to refute him. Those who aimed at innovation spoke of 'overtaking' him. The more the years passed, the more clearly his influence was perceived.'<sup>49</sup> However, since Finley gave his attention primarily to the anthropological aspects of the ancient economy (on the fiscal field he was, for example, concerned about the burden of taxation on peasants), he is not the most important post-war scholar in our field of research. After all, he was not concerned about the nature of the ancient economy or the bare facts of fiscal

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<sup>48</sup> K. Polanyi, *The great transformation* (New York/Toronto: Farrar & Rineheart, 1944).

<sup>49</sup> Andreau, 'Twenty years after *The ancient economy*', 34 (*op. cit.* n. 40).

developments, but with the way in which the ancients embedded these economic developments or situations into their behaviour.

It was a student of Finley who probably became the most important post-war scholar in the discussion on the nature of the antique economy. Although Keith Hopkins (1934-2004) was a student of Finley (and of A.H.M. Jones), he turned out to be Finley's methodological and historiographical opposite. His main criticism on the work of his former tutor was the idea of economic stagnation, mainly caused by the prevalence of self-sufficiency. He put his criticism aptly into words in his most cited publication: 'Taxes and trade in the Roman Empire (200 BC-AD 400)'.<sup>50</sup> Hopkins himself was well aware that this article took him - historiographically - miles away from Finley, judged by the understated acknowledgement to the publication: 'Inevitable, on this topic, my paper is written in friendly debate with Sir Moses Finley and his *The Ancient Economy* (1973)'.<sup>51</sup> The content of the article is highly speculative and relying heavily on a number of unverifiable propositions, but its refreshing and thought-provoking approach set a lot of scholars thinking.<sup>52</sup>

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<sup>50</sup> K. Hopkins, 'Taxes and trade in the Roman Empire (200 BC-AD 400)', *The Journal of Roman Studies* 70 (1980) 101-125; Hopkins nuanced his views in a revision of his discussed model in: idem, 'Rome, taxes, rents and trade', *Kodai: Journal of Ancient History* 6/7 (1995/1996) 41-75 [also published in: W. Scheidel and S. von Reden (edd.), *The ancient economy* (New York: Routledge, 2002) 190-230. Cf. W.V. Harris, 'Morris Keith Hopkins 1934-2004', *Bibliographical memoirs of fellows* 4 (*Proceedings of the British Academy*, 2005) 95. 81-105.

<sup>51</sup> Hopkins, 'Taxes and trade in the Roman Empire', 101 (*op. cit.* n. 50).

<sup>52</sup> E.g. R. Duncan-Jones, *Structure and scale in the Roman economy* (Cambridge: Cambridge University Press, 1990) 30-47.

Hopkins described in his article a general model of the Roman economy, in which the levying of taxes in money stimulated trade. The Roman Empire was divided into three different geographical spheres by Hopkins: an outer ring of frontier provinces, an inner ring of relatively rich tax-exporting provinces (like Spain, southern Gaul, northern Africa, Asia Minor, Syria and Egypt), and the tax-consuming centre.<sup>53</sup> The tax-exporting provinces needed to trade their surpluses to raise money to fulfil the imposed fiscal obligations. Then, the revenue of the collection in these parts of the empire was used for the army (outer ring) and the city of Rome with its Imperial Court (centre). Because of the relative prosperity of the empire during the Principate tax rates could be kept low, but when the government had to meet extra demands more frequently from the third century onwards (due to all sorts of well-known emergencies<sup>54</sup>), the government chose to debase the coinage instead of raising the general rate of taxation.<sup>55</sup> Hopkins himself gave an unparalleled description of the consequences of this policy. I would like to quote him in full here:

The traditional fiscal system broke down. Debasement and inflation had not been matched by an equivalent increase

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<sup>53</sup> *Ibidem*, 101.

<sup>54</sup> Many monographs on the crisis of the third century have been written over the years, e.g. MacMullen, *Roman governments response to crisis AD 235-337* (*op. cit.* n. 11); Carrié and Rousselle, *L'Empire romain en mutation des Sévères à Constantin* (*op. cit.* n. 13); P. Southern, *The Roman Empire from Severus to Constantine* (London: Routledge, 2001).

<sup>55</sup> For the monetary developments in this period see: A. Wassink, 'Inflation and financial policy under the Roman Empire to the Price Edict of 301 AD', *Historia: Zeitschrift für alte Geschichte* 40.4 (1991) 465-493.

in taxation; indeed, debasement had been used as a method of avoiding an increase in tax rates. As a result, the central government had insufficient money to meet its traditional obligations at current prices. The central government was no longer able to control the empire as a single political system; the spider's web of cash flow was broken. Soldiers and government officials, at the local level, increasingly took it upon themselves to secure their own supplies, in kind. The central government, as a result, could no longer control local rates of taxation, although it continued to fulminate against abuses. And finally, as currency became the less valuable part of government revenues, the central government could no longer transfer significant amounts of money (which gave command over distant resources) from one end of the empire to another. The breakdown of central control over taxation, that is over the distribution of a large part of surplus, was reflected in the formation of separate rival governments under rapid succession of emperors, generals and kings in France, Britain, Egypt and Syria, as well as in Rome.<sup>56</sup>

This paragraph written by Hopkins is one of the key passages on the (character of the) Roman economy underlying this thesis. It discusses - in a rather negative way - the situation in which the Roman Empire found itself in the transitional period between the Principate (the Hopkinsian 'High Empire', roughly ending with the reign of Commodus) and the Dominate: it was the situation that had to be restored by the reforms of Diocletian. The above-mentioned passage will therefore act as a hinge in the second chapter: How did

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<sup>56</sup> Hopkins, 'Taxes and trade in the Roman Empire', 123 (*op. cit.* n. 50).

Diocletian reform the tax-system of the Roman Empire? And what were the consequences of his reforms?

Meanwhile 'blijkt zelfs de onderzoekskaravaan van de antieke economische geschiedenis verder te zijn getrokken'<sup>57</sup>, and especially that of the late antique period: archaeologists have shown increased interest in the period, and a vast amount of new evidence has become available. The late antique economy is 'now one of the most lively areas of current research.'<sup>58</sup> In general, over the last ten years an increasing amount of scholars concerned with (the economy of) the late antique world have challenged the views of A.H.M. Jones emphasizing the healthy and expansive character of the later Roman economy in their publications<sup>59</sup>, which has perhaps been manifested most clearly in the concluding remarks of Jean-Michel Carrié in *L'Empire romain en mutation*: 'Prématurée est [...] l'idée que des coups fatals

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<sup>57</sup> De Ligt, 'Twintig jaar economische geschiedschrijving van de Oudheid', 4 (*op. cit.* n. 20).

<sup>58</sup> A. Cameron, *The Mediterranean world in late antiquity, AD 395-600* (London: Routledge, 1993) 81.

<sup>59</sup> E.g.: C.R. Whittaker and P. Garnsey, 'Rural life in the later Roman Empire', in: A. Cameron and P. Garnsey (edd.), *The Cambridge Ancient History. Volume 13: the late empire, A.D. 337-425* (Cambridge: Cambridge University Press, 1998) 277-311; C. Wickham, 'Overview: production, distribution and demand', in: R. Hodges and W. Bowden (edd.), *The sixth century: production, distribution and demand* (Leiden: Brill, 1998) 279-292; idem, *Framing the early Middle Ages: Europe and the Mediterranean, 400-800* (Oxford: Oxford University Press, 2005); or the much-debated work by Banaji, *Agrarian change in Late Antiquity* (*op. cit.* n. 14), who emphasizes the importance of monetary transactions and the accumulation of gold within the late antique society. Most recently this positive view on the later Roman Empire has been proposed in an extensive article by P.F. Bang, 'Trade and empire - in search of organizing concepts for the Roman economy', *Past and Present* 195 (2007) 3-54.

aient été, dès III<sup>e</sup> siècle, portés à l'économie romaine par les grandes épidémies, les dévastations barbares, les contraintes étatiques, ou la conjonction de tous ces facteurs: le niveau de performance manifesté par l'Empire au IV<sup>e</sup> siècle apporte un démenti décisif.<sup>60</sup> However, there still is a considerable host of scholars preferring to treat the period within an overall framework of decline.<sup>61</sup> According to (some of) them the historiographical pendulum is swinging back to 'decline' after a period wherein Late Antiquity was perceived rather positive.

One scholar should be mentioned here in particular, and that is Roger S. Bagnall (1947-) - by far the most important scholar on Egypt in Late Antiquity - who published a general overview of fourth-century Egypt in 1993.<sup>62</sup> It is rather difficult to pigeon-hole Bagnall historiographically, but if I had one word to describe his work, I would call him a 'realist': a lot of scholars are inclined to present their views too negatively or too positively. Roger Bagnall is able to discuss problems from a great number of different angles - like Fyodor Dostoevsky in his novel *The Brothers Karamazov* -

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<sup>60</sup> Carrié and Rousselle, *L'Empire romain en mutation des Sévères à Constantin, 725-726* (op. cit. n. 13).

<sup>61</sup> E.g.: Liebeschuetz, *The decline and fall of the Roman city* (op. cit. n. 15); B. Ward-Perkins, *The fall of Rome and the end of civilization* (Oxford: Oxford University Press, 2005); M. McCormick, *Origins of the European economy: communications and commerce, AD 300-900* (Cambridge: Cambridge University Press, 2001).

<sup>62</sup> R.S. Bagnall, *Egypt in Late Antiquity* (Princeton: Princeton University Press, 1993). This work is solely concerned with Egypt in the fourth century. In 2007, Roger Bagnall edited a volume with the same geographic scope, but with a much wider chronology: R.S. Bagnall (ed.), *Egypt in the Byzantine world, 300-700* (Cambridge: Cambridge University Press, 2007).

thereby creating a balanced account of the late antique Roman-Egyptian society. This is mainly due to the fact that papyrology and history are strongly interwoven with one another in his work.

### 1.5 *Methodology*

As already stated in the above, this present work is composed like a three-stage rocket: this automatically results in a multidimensional methodological approach. On the preceding pages, we ‘took off’ with our first approach: the historiographical overview in which I have sketched the most important developments in the debate on ancient economy over the last generations, with a special emphasis on the discussion on the nature of the late antique world. We have seen that the same questions were asked over and over again in different forms, with different approaches, documented with new evidence - increased in quantity by new research techniques - but the central issue in the debate remained the character of the ancient economy. This theoretical framework was the indispensable starting point for our search, but as a framework it is meaningless unless an exterior and an interior are added to the construction.

It would be a sign of ignorance (or: ὑβρις), claiming that this thesis would offer a definite answer to the question: How can we characterise the late antique economy? And it is just as impossible to discuss the ancient economy as a whole (in my opinion, the only attempt to write a history of the later Roman economy as a whole *not* having failed is A.H.M. Jones’ *The later Roman Empire*). Therefore, I have made the choice to confine myself to one of the most important aspects of the



ancient economy: fiscality. As such, the later Roman system of taxation will figure as a porthole to look through to the late antique economy as a whole.

The remainder of this thesis will therefore be solely concerned with taxation in the (later) Roman Empire: at macro level (chapter II) and micro level (chapter III). Although the late antique system of taxation is a much-debated topic in the modern historiographical landscape (which seems to be dominated by French-speaking scholars: a majority of the important contributions is written in French), there has - as far as I know - been no attempt to write a systematic overview of the subject matter (and this is neither the pretension of the present work). Jean-Michel Carrié wrote in the introduction of an article published in 1993: 'J'ai entrepris voici plusieurs années des recherches sur ce thème [sc. the later Roman tax system] et m'apprêtais à rédiger une monographie dont les éléments principaux sont en place, mais dont la réalisation finale a dû être ajournée.'<sup>63</sup> Now, almost fifteen years later, this promised monograph is still waiting to be written and when the present author made discrete inquiries after the progress of the announced work, Carrié did not answer.<sup>64</sup>

May we conclude from this silence that his intention is - if not impossible - difficult to realise? How different was the opinion of Peter Brown on this problem, talking about the

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<sup>63</sup> J.-M. Carrié, 'Observations sur la fiscalité du IV<sup>e</sup> siècle pour servir à l'histoire monétaire', in: L. Camilli and S. Sorda (edd.), *L'« inflazione» nel quarto secolo d.C.: atti dell'incontro di studio, Roma 1988* (Rome: Istituto Italiano di Numismatica, 1993) 115.

<sup>64</sup> In personal correspondence with Jean-Michel Carrié on 14 March 2007.

obvious and well-documented developments of the repercussions of high taxation on the late antique society.<sup>65</sup> Again, we can clearly see the difference between the aforementioned ‘subspecies’ of late antique historians: where Carrié mainly focuses on the role of the Roman government (since a general overview of the later Roman system - or any system - of taxation can only be written from a top-down point of view<sup>66</sup>), Brown emphasizes the impact of the governmental policy on society.

In my overview I can only sketch the broad outlines of the historical development of taxation in the later Roman Empire. In first instance, it is my intention to look at the impact of the reforms initiated by Diocletian: What were the most important changes when one compares the late antique situation with the famous Golden Age of Roman history? Can we attest a certain continuation of policy dating back to the (early) Principate? An interesting question in view of the third chapter on the archive of Papnuthis and Dorotheus is whether there was some uniformity in the levying of taxes within the empire, or whether there were some common denominators. For our discussion on the character of the late antique economy we have to discuss the way in which taxes were levied (in kind or in money), and whether we can discover a trend in what categories taxes were levied in kind or, on the contrary, levied in money. In short, the chapter will serve a double purpose: on the one hand, it will be an

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<sup>65</sup> Brown, *The world of late antiquity*, 8 (*op. cit.* n. 8). Cf. A.H.M. Jones, ‘Over-taxation and the decline of the Roman Empire’, in: idem, *The Roman economy*, 82-89 (*op. cit.* n. 45).

<sup>66</sup> G. Ardant, *Histoire de l’impôt. Livre I : De l’Antiquité au XVIIe siècle* (Paris: Fayard, 1971) 9-21.

illustration to the historiographical discussion above, but on the other hand, it is the prelude to the account on fourth-century Oxyrhynchus.

I will conclude this theoretical chapter of my thesis with a brief paragraph on the importance of papyrology to the field of ancient history and on the myth of the Egyptian *Sonderweg*.

### 1.6 ‘Reading papyri, writing ancient history’<sup>67</sup>

Since the publication of the first papyrus in 1788 - the so-called Charta Borgiana - an enormous quantity of papyri has been excavated and published.<sup>68</sup> In contrast to ‘mainstream’ ancient history - ‘rich in laments over the poverty of its source material’<sup>69</sup> - one will not hear papyrologists complain about the lack of evidence: tens of thousands of papyri in (mainly) European and North-American libraries are still waiting to be published - excluding the unknown number of texts still hidden in the Egyptian desert, of which the preservation is threatened by the rising groundwater level after the Aswan High Dam came into operation, and excluding the circa 60,000 papyri already published.

An overwhelming majority of the papyri has been found in the dry desert of Egypt (and within Egypt especially in the areas of Oxyrhynchus, Hermopolis, Antinoopolis, Panopolis

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<sup>67</sup> R.S. Bagnall, *Reading papyri, writing ancient history* (London: Routledge, 1995); forms an excellent introduction to the field of papyrology, as does the older: E.G. Turner, *Greek papyri: an introduction* (Oxford: Clarendon Press, 1980<sup>2</sup>).

<sup>68</sup> N.I. Schow, *Charta papyracea graece scripta Musei Borgiani Velitris, qua series incolarum Ptolemaidis Arsinoiticae in aggeribus et fossis operantium exhibetur* (Rome: A. Fulgonius, 1788).

<sup>69</sup> Bagnall, *Egypt in Late Antiquity*, 4-8 (*op. cit.* n. 62).

and Arsinoe) - and, even though 'Egypt ceased to be the only part of the Empire from which there are now substantial numbers of documentary texts written on perishable materials'<sup>70</sup>, it will remain our best documented part of the Roman Empire for a long time. The geographic bias of papyri as source material has played an important role in the discussion on the *Sonderweg* of Egypt: To what extent was Egypt a 'normal' province? The answer to this question was for a long time dominated by the impression left by the second book of Herodotus' *Histories*, in which Egypt is depicted as a unique area incomparable to other territories of the ancient world.<sup>71</sup> Only the last decades the *communis opinio* has changed into a view wherein Egypt was not such a peculiar province after all.<sup>72</sup> Dominique Rathbone has put this view into words most aptly:

My starting assumptions are that there was great regional diversity in the society and economy of the classical world in general, rather than a peculiar chasm between Egypt and the rest of that world, but that behind this general

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<sup>70</sup> H.M. Cotton, W.E.H. Cockle and F.G.B. Millar, 'The papyrology of the Roman Near East: a survey', *The Journal of Roman Studies* 85 (1995) 214; see also: and E. Crisci, *Scrivere greco fuori d'Egitto: ricerche sui manoscritti greco-orientali di origine non egiziana dal IV secolo a.C. all'VIII d.C.* (Florence: Gonnelli, 1996).

<sup>71</sup> The most extensive commentary on the second book of Herodotus' *Histories* is: A.B. Lloyd, *Herodotus: book II* (3 volumes; Leiden: Brill, 1975-1988).

<sup>72</sup> E.g. N. Lewis, 'The Romanity of Roman Egypt: a growing consensus', *Atti del XVII congresso internazionale di papirologia* (Naples: Centro Internazionale per lo Studio dei Papiri Ercolanesi, 1984) 1077-1084. Cf. J. Karayannopoulos, *Das Finanzwesen des frühbyzantinischen Staates* (Munich: R. Oldenbourg, 1958) xi.

diversity there were also similar and at times even identical economic developments for which the Egyptian evidence provides a keyhole on a much wider panorama.<sup>73</sup>

I do not only assume that there were regional diversities and similarities within the Roman Empire, I take this for granted - recalling the subtitle of a recent publication by Richard Hingley: 'unity, diversity and empire'.<sup>74</sup> Each specific part of the empire had its own distinguishing features, though they were also part of that same Roman Empire: there was diversity, as well as unity between and within every province of the empire. In the case of Egypt there were, for example, considerable differences between the various nomes on

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<sup>73</sup> D. Rathbone, 'The ancient economy and Graeco-Roman Egypt', in: W. Scheidel and S. von Reden (edd.), *The ancient economy* (New York: Routledge, 2002) 157-158 [originally published in: L. Criscuolo and G. Geraci (edd.), *Egitto e storia antica dall'ellenismo all'età Araba: bilancio di un confronto* (Bologna: CLUEB, 1989) 159-176]. Cf. H. Heinen, 'L'Égypte dans l'historiographie moderne du monde hellénistique', in: Criscuolo and Geraci (edd.), *Egitto e storia antica dall'ellenismo all'età Araba*, 105-135, commenting on the naïve pronouncements on the importance of papyrology by Alfred Heuss: A. Heuss, 'Vom Unbehagen des Althistorikers', in: J. Bleicken (ed.), *Symposion für Alfred Heuss* (Kallmünz: Lassleben, 1986) 86: 'Die Entdeckung der Papyri war da eine Ausnahme und wurde deshalb sr. Zeit zur Sensation, aber für die Geschichte konnten sie nicht dieselbe Bedeutung wie für die Philologie gewinnen, weil sie allein die ägyptischen Verhältnisse illustrieren, diese jedoch für die anderen, die außerägyptischen Länder keinerlei Aussagekraft haben, sondern in deren Zusammenhang zumeist als atypisch gelten müssen. Die historische Papyrologie ist denn auch schon nach dem Ersten Weltkrieg, d.h. im Grunde bereits mit dem Ausgang der Entdeckungsgeneration, nahezu erloschen.'

<sup>74</sup> R. Hingley, *Globalizing Roman culture: unity, diversity and empire* (London: Routledge, 2005). Cf. Cameron, *The Mediterranean world in late antiquity*, 10 (*op. cit.* n. 58).

cultural and administrative level ‘including variations in customs of land-tenure and in types and names of taxes and officials’.<sup>75</sup>

Anyway, because Egypt is so uniquely documented thanks to the preservation of its papyri, it is possible to write a ‘history from below’.<sup>76</sup> Such an approach emphasizes the Carcopinian daily life, and tends to refer the role of the government to the background. Especially in cases where a cluster of texts belonging or referring to the same persons and subjects - a so-called ‘archive’<sup>77</sup> - is preserved, it is possible to reconstruct a part of ancient society which was not known before. This will also be our approach in the third chapter of this thesis: the circa 50 texts belonging to the archive of Papnuthis and Dorotheus will be our spy hole to ancient history, serving as our point of departure to get as close to the late antique society as possible. However, before we can focus on the Oxyrhynchite situation in the third chapter, we will take a closer look at the later Roman system of taxation in general in the next chapter.

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<sup>75</sup> D. Rathbone, ‘Egypt, Augustus and Roman taxation’, *Cahiers du Centre Gustave Glotz* 4 (1993) 82.

<sup>76</sup> Cf. N. Lewis, *Life in Egypt under Roman rule* (Oxford: Clarendon Press, 1983) 1-3.

<sup>77</sup> Cf. A. Martin, ‘Archives privées et cachettes documentaires’, in: A. Bülow-Jacobsen (ed.), *Proceedings of the 20th international congress of papyrologists: Copenhagen, 23-29 August, 1992* (Copenhagen: Museum Tusulanum Press, 1994) 569-577.

## ∞ II ∞

# The later Roman system of taxation, with special emphasis on Egypt

It has become clear from the last chapter that the nature of the ancient economy, and in particular that of the late antique world is a much debated topic. It is clear that a thesis like the present one cannot offer any conclusive answers to that debate, but this contribution might add some nuances to the discussion not only by emphasizing the broad outlines - as in the present chapter - but also by studying in detail the later Roman system of taxation as put into daily practice in fourth-century Oxyrhynchus as will be illustrated by the archive of Papnuthis and Dorotheus.

In the previous chapter, it has already been noticed that the later Roman system of taxation has become a much discussed issue in late antique studies. For a long time it was thought that the history of late antique fiscality was relatively well known to us. This is perhaps true in a certain way and for certain areas of research<sup>78</sup>, but the current evidence is still

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<sup>78</sup> A. Chastagnol, 'Problèmes fiscaux du Bas-Empire', in: H. van Effenterre (ed.), *Points de vue sur la fiscalité antique* (Paris: Université de Paris, 1979) 127: '...nous disposons de sources relativement nombreuses qui s'y rapportent ou y font allusion et qui insistent sur quelques-uns de ses traits, en particulier la lourdeur de l'impôt, son caractère exigeant et inexorable, les contraintes auxquelles il donna lieu pour les individus et les groupements de contribuables.'

inadequate for writing a well-founded monograph on the system as a whole.

The first and, to my knowledge, last attempt to publish a history of taxation in late antiquity was made by Walter Goffart in 1974. This study was, however, received not very well at all. Though, the book was - at least in my opinion - the starting point of a lively discussion on the workings of the later Roman tax system, and that was exactly Goffart's intention: 'They [sc. the opinions advanced in the book] invite refutation rather than assent. The purpose of advancing them will have been served if they stimulate further discussion.'<sup>79</sup> The (often radical) conclusions of Goffart provoked further discussion indeed. Many well known scholars reviewed the work and their judgement was unanimous: it was a nice and thought-provoking attempt, but nothing more. Some reviewers took the trouble to express their views with some tact ('The reviewer has to admit that he does not find them [sc. Goffart's conclusions] convincing, though a brief review will not allow counter-arguments to be rehearsed in full.'<sup>80</sup>), others clearly did not mince their words ('Whatever the merits of this work [...] they are obscured by

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<sup>79</sup> W. Goffart, *Caput and colonate: towards a history of late Roman taxation* (Toronto: University of Toronto Press, 1974) 110.

<sup>80</sup> R. Duncan-Jones, '[review of Goffart, *Caput und colonate: towards a history of late Roman taxation*]', *The Journal of Roman Studies* 67 (1977) 202. Without saying so explicitly, a full counter-argument to the ideas of Goffart has been written by U. Hildesheim, *Personalaspekte der frühbyzantinischen Steuerordnung. Die Personalveranlagung und ihre Einbindung in das System der capitatio-iugatio* (Pfaffenweiler: Centaurus-Verlagsgesellschaft, 1988).



the defects, and as a whole the book leads us more away from than towards a history of late Roman taxation.<sup>81</sup>).

It would be a sign of historiographical ignorance if I would claim here that the present chapter contains a concise discussion on the workings of the Roman system of taxation: it certainly does not. Instead, in the remainder of this chapter I will sketch the outlines of antique taxation, with a special emphasis on (the importance of) the late antique reforms and the organization of the system in the late third and fourth centuries. This chapter should especially be considered in the light of the next chapter on the archive of Paphnutius and Dorotheus: it will serve as a historical background to the ‘micro level’ situation discussed there.

The first paragraph of this chapter, however, is concerned with Roman fiscality in earlier times. Conclusions on the character of the later Roman economy as a whole - in this work illustrated by the system of taxation - do not become of value until the results can be compared with results from a different period. In view of the debate on the ‘decline and fall’ of the Roman Empire and the assumed differences between the Principate and the late antique world, it speaks for itself that the Roman Empire in the first centuries of the Christian era is used here as comparison. After all, the question underlying the subtitle of this work is: how

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<sup>81</sup> P.W. de Neeve, ‘[review of Goffart, *Caput und colonate: towards a history of late Roman taxation*]', *Mnemosyne: a journal of classical studies* 31 (1978) 111; also see: R. MacMullen, ‘[review of Goffart, *Caput und colonate: towards a history of late Roman taxation*]', *Classical Philology* 71.2 (1976) 188: ‘It is by no means a welcome task to judge so harshly the fruits of long study by a serious scholar. It would be, however, still less welcome if this work should be used by the unguarded as a reliable foundation for an understanding of significant historical questions.’

different was the economic situation in Late Antiquity compared with the Gibbonian ‘Golden Age’? Was the later Roman Empire still a golden age or had it degenerated into an era of silver, bronze, iron, or even: lead?<sup>82</sup>

Since ‘Egypt provides our one practical example of how Rome taxed her provinces’, the discussion below will be geographically biased on that part of the empire.<sup>83</sup>

## 2.1 *Roman taxation in the pre-Diocletianic era*

Despite the fact that the system of taxation in the Roman Empire was well-structured, there was no uniform system prevalent<sup>84</sup>: ‘diversity, not consistency.’<sup>85</sup> Besides, the ‘fiscal structure of the empire’ was dramatically inelastic, for the rates fixed during the reigns of the first emperors were never altered.<sup>86</sup> And this goes for all three main categories of fiscal

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<sup>82</sup> Hesiod, *Opera et dies*, 129-234; cf. R.H. Martin, ‘The Golden Age and the κύκλος γενέσεών (cyclical theory) in Greek and Latin literature’, *Greece & Rome* 35/36 (1943) 62-71.

<sup>83</sup> R. Duncan-Jones, *Money and government in the Roman Empire* (Cambridge: Cambridge University Press, 1994) 47.

<sup>84</sup> Cf. Lewis, *Life in Egypt under Roman rule*, 159 (*op. cit.* n. 76); Duncan-Jones, *Money and government in the Roman Empire*, 47 (*op. cit.* n. 83); B.D. Shaw, ‘Roman taxation’, in: M. Grant and R. Kitzinger (ed.), *Civilization of the ancient Mediterranean: Greece and Rome* (New York: Scribner’s, 1988) 809.

<sup>85</sup> R. Duncan-Jones, *Structure and scale in the Roman economy*, 187 (*op. cit.* n. 52).

<sup>86</sup> Jones, *The later Roman Empire*, 284-602, 9 (*op. cit.* n. 7): ‘Taxes were not adjusted to meet the fluctuating needs of the government.’ Cf. Hopkins, ‘Taxes and trade in the Roman Empire’, 123 (*op. cit.* n. 50).

charges: the tax on land (*tributum soli*), the poll-tax (*tributum capitis*) and the custom dues (*portoria*<sup>87</sup>).

The tax on land was by far the most important fiscal burden in the empire and this ought to be no surprise. The Roman economy was an ‘underdeveloped’ economy and it is symptomatic of such an economy that a large proportion of the population is employed in agriculture.<sup>88</sup> For the Roman Empire, it has been estimated that up to three-quarters of the population was working in the agricultural sector<sup>89</sup>: the possession of agricultural land was therefore the most important source of wealth<sup>90</sup>; and this makes it perfectly logical that the fiscal burden principally fell on the land.<sup>91</sup>

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<sup>87</sup> S. de Laet, *Portorium: étude sur l'organisation douanière chez les Romains, surtout à l'époque du Haut-Empire* (Bruges: De Tempel, 1949). For the Egyptian evidence on custom dues see: P.J. Sijpesteijn, *Customs duties in Graeco-Roman Egypt* (Zutphen: Terra, 1987); however, cf. Shaw, ‘Roman taxation’, 809-810 (*op. cit.* n. 84).

<sup>88</sup> P. Garnsey and R. Saller, *The Roman Empire: economy, society and culture* (London: Duckworth, 1987) 43

<sup>89</sup> R.W. Goldsmith, *Premodern financial systems: a historical comparative study* (Cambridge: Cambridge University Press, 1987) 34-35.

<sup>90</sup> Cf. Cicero, *De officiis.*, I.151: ‘Omnium autem rerum, ex quibus aliquid acquiritur, nihil est agri cultura melius, nihil uberius, nihil dulcius, nihil homini libero dignius.’ It should be mentioned that Cicero is not talking about ‘subsistence farming’ here, but about the so-called ‘gentleman farmer’, evoking a country life of arcadian contentment. Also see: Finley, *The ancient economy*, 58 (*op. cit.* n. 19).

<sup>91</sup> Bagnall, *Egypt in Late Antiquity*, 153 (*op. cit.* n. 62); cf. idem, ‘Agricultural productivity and taxation in later Roman Egypt’, *Transactions of the American Philological Association* 115 (1985) 289: ‘... agriculture was the main part of the ancient economy, farmers living on the land were the vast majority of the ancient population, and taxes on land the bulk of government revenues.’ Cf. A.H.M. Jones, ‘Taxation in antiquity’, in: idem, *The Roman economy*, 164 (*op. cit.* n. 45) and Finley, *The ancient economy*, 91 (*op. cit.* n. 19).

The *tributum soli* was only levied in the provinces of the empire, since Italian soil was exempt from paying the land-tax from Aemilius Paulus' victory over the Macedonians in the second century BC onwards.<sup>92</sup> From that moment, revenues from provincial sources were 'sufficiently regular to allow the Roman state to abandon the imposition of tribute on its own citizens'.<sup>93</sup>

The *tributum soli* was levied in different ways in different areas of the empire. This can be shown by citing a passage from *De limitibus* written by the second-century land-surveyor Hyginus Gromaticus: 'In some provinces they pay a part of the crop, in some a fifth, in others a seventh; in still others a money payment. The amount is assessed by a valuation of the land itself. Set values are established for types of land, as in Pannonia, where the categories are: first- and second class arable; meadow-land; first- and second-class woodland; fruit-bearing trees and pasture. For all these different land types a rate is established on a *per iugerum* basis according to its productiveness.'<sup>94</sup>

Some interesting conclusions can be derived from this passage. First of all that some provinces paid the land-tax in kind, while others paid the charge in money. Duncan-Jones

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<sup>92</sup> Cicero, *De officiis* II.76: 'Omni Macedonum gaza, quae fuit maxima, potitus Paulus; tantum in aerarium pecuniae invexit, ut unius imperatoris praeda finem attulerit tributorum.'; Cf. Plinius Maior, *Naturalis historia*, XXXIII.56.

<sup>93</sup> Shaw, 'Roman taxation', 813 (*op. cit.* n. 84).

<sup>94</sup> Hyginus Gromaticus, *De limitibus*, 205L (my own translation, adapted from R. Duncan-Jones and B.D. Shaw). The most recent discussion on this text is: O. Behrens and L. Capogrossi Colognesi, (*Hygin*) *L'oeuvre gromatique* (Luxemburg: Office des Publications Officielles des Communautés Européennes, 2000).

has summed up in a short inventory which provinces fell into which category<sup>95</sup>: Spain, (most of) Africa, Syria, Cilicia, Judaea and Messene paid the *tributum soli* in money; while Egypt, Sicily, Sardinia, Asia (Minor), Phrygia, Thrace, Cyrene, Pontus, and even the lands of the Frisii and Batavi, paid their tax in kind. However, the categories were not mutually exclusive. Baetica in Spain, for example, sent (tax-)grain to the soldiers who were serving in Mauretania during the reign of Claudius<sup>96</sup>, whilst, on the other hand, the *tributum soli* on vine and olive yards in Egypt was assessed in money<sup>97</sup>. In general, however, the provinces paid their land-tax as described above.

A second conclusion to be drawn from Hyginus is that there apparently existed ingenious land registers to assess the correct tax-rates on the land. This is proved by an extensive law on censuses from Ulpian in the *Digesta*: 'It is laid down in the list of rules for the census that land must be entered in the census in this way: the name of each property, the community, and the *pagus* to which it belongs, its nearest two neighbours; then, how many *iugera* of land have been sown for the last ten years, how many vines vineyards have, how many *iugera* are olive-plantations and with how many trees, how many *iugera* of land have been used for hay for the last ten years, how many *iugera* of pasture there are, likewise for wood for felling. The man who declares anything must

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<sup>95</sup> Duncan-Jones, *Structure and scale in the Roman economy*, 188-193 (op. cit. n. 52).

<sup>96</sup> Cassius Dio, LX.24.5.

<sup>97</sup> L. Neesen, *Untersuchungen zu den direkten Staatsabgaben der römischen Kaiserzeit (27 v. Chr. - 284 n. Chr.)* (Bonn: Habelt, 1980) 91-92.

value it.<sup>98</sup> We are getting the impression that the land was almost taxed to the last square foot.

When we take a closer look at the best documented part of the empire - Egypt - we see various legal (sub-)categories of land.<sup>99</sup> The two main categories to be distinguished from the reign of Augustus onwards were public land (*δημοσία γῆ*) and private land (*ιδιωτική γῆ*), and by introducing these subdivisions Egypt was brought into 'the traditional Roman framework of *ager publicus* and *ager privatus*'.<sup>100</sup> It made an enormous difference to the amount of tax to be paid whether one cultivated the former or the latter type of land. Private land was assessed at rates of  $\frac{3}{4}$  to 2 *artabas* per *aroura*<sup>101</sup>, whilst the rents paid on the public lands were - usually - much higher. On the basis of nine land-registers<sup>102</sup>, representing an area of 56,682 *arouras* of land, Duncan-Jones has estimated that the average tax yield over 7,163 *arouras* of private land was 1.29 *artabas* per *aroura*. The average rate for public land (49,519 *arouras*) was 4.13 *artabas* per *aroura*. Supplementary charges, like the *διχοινικία* (5% surcharge),

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<sup>98</sup> *Digesta Iustiniani*, L.15.4 (translated by Alan Watson).

<sup>99</sup> S.L. Wallace, *Taxation in Egypt from Augustus to Diocletian* (Princeton: Princeton University Press, 1938) 1-19. An index locorum of this work has been compiled by C. Worp and K.A. Worp, 'Index locorum', *Zeitschrift für Papyrologie und Epigraphik* 16 (1975) 81-120.

<sup>100</sup> Rathbone, 'Egypt, Augustus and Roman taxation', 85 (*op. cit.* n. 75).

<sup>101</sup> Wallace, *Taxation in Egypt from Augustus to Diocletian*, 19 (*op. cit.* n. 99).

<sup>102</sup> *BGU* I 20 (Philagris, 141-142); *BGU* VII 1636 (Philadelphia, 155-156); *P. Bour.* 42 (Hiera Nesos, 166-167); *P. Flor.* III 331 (Apollonopolites Heptakomias, ca. 113-120); *P. Giss.* I 60 (Naboo, 118); *P. Gron.* 2 (Arsinoite nome, 219-220); *P. Lond.* II 193 (Arsinoite nome, ca. 50-100); *P. Oxy.* VI 918 (Arsinoite nome, 2<sup>nd</sup> century); *SB* I 4325 (Euhemeria, end 2<sup>nd</sup> century/beginning 3<sup>rd</sup> century).

increased the amount due in all cases with five to ten per cent.<sup>103</sup>

However, not all taxes on land were collected in kind in Egypt.<sup>104</sup> Taxes on vine-land and orchards were collected in money, but - even though the rates on vine- and olive-yards were considerably higher than the charges on grain-land - the area cultivated with these tree crops was very small in proportion to the amount of land sown with cereals.<sup>105</sup> So, during the Principate the land-tax was assessed in kind and in money: because most of the land was sown with grain - and since the taxes on grain-land were collected in kind - the yield in kind would have been considerably higher than the revenues in money.

Besides the tax on land, there also existed an annual poll-tax in many provinces of the Roman Empire (*tributum capitis*). In the Republic there had been no regular poll-tax, but a regularly levied *tributum capitis* was introduced during the reign of Augustus. The introduction of this capitation-tax was 'a novelty both for Egypt and for the Roman world in general.'<sup>106</sup> The capitation-charge did not appear completely out of the blue: in Egypt, Augustus found a system in place for the registration of the population that was established at

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<sup>103</sup> Lewis, *Life in Egypt under Roman rule*, 166 (*op. cit.* n. 76).

<sup>104</sup> Wallace, *Taxation in Egypt from Augustus to Diocletian*, 47-76 (*op. cit.* n. 99).

<sup>105</sup> Duncan-Jones, *Money and government in the Roman Empire*, 50 (*op. cit.* n. 83); cf. Wallace, *Taxation in Egypt from Augustus to Diocletian*, 47 (*op. cit.* n. 99). However, see: M.I. Rostovtzev, *The social and economic history of the Roman Empire* (Oxford: Clarendon Press, 1926) 439-440.

<sup>106</sup> Rathbone, 'Egypt, Augustus and Roman taxation', 86 (*op. cit.* n. 75). The poll-tax was first introduced in Egypt. From there, it was introduced in the other provinces of the empire.

the end of the 3<sup>rd</sup> century BC in order to maximize the tax-revenue of the capitation-charge levied upon the Egyptians<sup>107</sup> (like the *άλική*, the salt tax). Augustus used this existing census for the levying of the Roman *tributum capitis*, of which the *λαογραφία*, the ‘census-tax’<sup>108</sup>, was the main element in Egypt. The registers used for the collection of the census-tax were also used for other minor capitation-charges<sup>109</sup> (often designated as *μερισμοί*), of which the yield was particularly destined for the provincial and local administration.

In any case, Augustus imposed a fixed sum per head on the Egyptian population. This sum had to be paid annually by all males - including slaves - from 14 to 62 (or: 65)<sup>110</sup> living in the Egyptian *χώρᾱ* (countryside), i.e. outside the territory of Alexandria that was exempted from paying the *tributum capitis*. The rates varied between the nomes and the inhabitants of the nome capitals, the privileged class of

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<sup>107</sup> S.L. Wallace, ‘Census and poll-tax in Ptolemaic Egypt’, *American Journal of Philology* 59 (1938) 418-442; for a diametrically opposed point of view: J.A.S. Evans, ‘The poll-tax in Egypt’, *Aegyptus: rivista italiana di egittologia e di papirologia* 37 (1957) 259-265.

<sup>108</sup> It is not sure whether there existed an exact equivalent of the *λαογραφία* in Ptolemaic Egypt. An annual capitation charge, the *συντάξιμον*, was levied in the first century BC in the Arsinoite nome, but ‘the evidence for the Ptolemaic use of the term *συντάξιμον* needs thorough re-investigation’: Rathbone, ‘Egypt, Augustus and Roman taxation’, 91 (*op. cit.* n. 75).

<sup>109</sup> E.g.: J.C. Shelton, ‘The extra charges on poll-tax in Roman Egypt’, *Chronique d’Égypte: bulletin périodique de la Fondation Égyptologique Reine Élisabeth* 51 (1976) 178-184; Wallace, *Taxation in Egypt from Augustus to Diocletian*, 135-169 (*op. cit.* n. 99).

<sup>110</sup> Wallace, *Taxation in Egypt from Augustus to Diocletian*, 105-109 (*op. cit.* n. 99).



metropolitans, paid a reduced rate.<sup>111</sup> The lowest rate seems to have been paid by the inhabitants of the metropoleis in Lower and Middle Egypt (eight drachmas a year), whilst the rural population of the Arsinoite nome was assessed at forty drachmas a year.

Legal evidence shows us that there was no uniformity in the assessment of the *tributum capitis* between the provinces of the Roman Empire either: 'In the provinces of Syria men are bound to pay poll-tax from fourteen, women from twelve, in both cases up to sixty-five.'<sup>112</sup> Egypt was the only province - as far as we know - where women were exempted from paying the poll-tax, probably because 'elsewhere the Romans found it simpler to adopt the normal Hellenistic liability of women to capitation taxes, from which late Ptolemaic and Roman domestic practice had diverged.'<sup>113</sup>

Every fourteen years<sup>114</sup> a census was taken in Egypt 'indem die Hausbesitzer veranlaßt wurden, schriftliche Erklärungen über ihre Häuser sowie die Hausbewohner jeglichen Rechtsstandes, Geschlechts und Alters abzugeben.'<sup>115</sup> This information had to be declared for every single house. From these census-lists officials could draw up other lists of those liable to all sorts of capitation-charges. Every fourteen years

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<sup>111</sup> Duncan-Jones, *Money and government in the Roman Empire*, 52 (*op. cit.* n. 83).

<sup>112</sup> *Digesta Iustiniani*, L.15.3 (translated by Alan Watson).

<sup>113</sup> Rathbone, 'Egypt, Augustus and Roman taxation', 97 (*op. cit.* n. 75).

<sup>114</sup> The fourteen years' cycle was introduced during the reign of Tiberius, in Augustus' reign the censuses took place every seven years: R.S. Bagnall, 'The beginnings of the Roman census in Egypt', *Greek, Roman and Byzantine Studies* 32.3 (1991) 255-265.

<sup>115</sup> Neesen, *Untersuchungen zu den direkten Staatsabgaben der römischen Kaiserzeit*, 132 (*op. cit.* n. 97).

the lists were renewed to include all males who reached the age of liability in between. In Egypt, landed property was registered through a separate system - though it is possible that the census and land registers were kept up-to-date together in other provinces. Hence, the only property registered (but not valued) in the Egyptian census were houses.<sup>116</sup>

The last important category of fiscal charges levied in the Roman Empire were the custom dues and transit tolls (*portoria*). The term originally denoted harbour dues only, but the term was soon extended to all sorts of land and sea dues. The toll on goods was most often ranging between 2% and 5% of the value of the freight, but on the eastern border of the empire, like at the Red Sea ports, we find a rate of 25% *ad valorem*. This excessive rate has been explained as a way to control the flow of gold to India.<sup>117</sup> The dues at the internal customs barriers were much lower. A charge called *ῥοκαὶ ὕ* (in particular attested in a large number of receipts from the

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<sup>116</sup> Rathbone, 'Egypt, Augustus and Roman taxation', 89 (*op. cit.* n. 75); Neesen, *Untersuchungen zu den direkten Staatsabgaben der römischen Kaiserzeit*, 122-124 (*op. cit.* n. 97).

<sup>117</sup> F. Millar, *The Roman Empire and its neighbours*<sup>2</sup> (London: Duckworth, 1981) 91; H. Harrauer and P.J. Sijpesteijn, 'Ein neues Dokument zu Roms Indienhandel: P. Vindob. G. 40822', *Anzeiger Österreichische Akademie der Wissenschaften Philosophisch-historische Klasse* 122 (1985) 124-155; however, see: A. Bernardi, 'The economic problems of the Roman Empire at the time of its decline', *Studia et documenta historiae et iuris* 31 (1965) 115-116 (revised publication in: C.M. Cipolla (ed.), *The economic decline of empires* (London: Methuen, 1970) 16-83. Earlier scholars have doubted whether the Romans ever collected such a high duty on imports. Hirschfeld suggested that the *τετάρτης* had to be interpreted as 2.5% (a rate attested in Asia and Gaul) instead of 25% found in Egypt: O. Hirschfeld, *Die kaiserlichen Verwaltungsbeamten bis auf Diocletian*<sup>2</sup> (Berlin: Weidmann, 1905) 80-81.

Arsinoite nome, but also known from other parts of Egypt) was a local export- and import-toll of 3% on the value of the freight.

Besides the *portoria* there were a large number of (minor) taxes that ought to be paid in money. These charges were put under the header of ‘Taxes on trades’ by Sherman Wallace in his work on Egyptian taxation in the Principate.<sup>118</sup> Roughly, these trade-taxes can be subdivided into three categories: the state monopolies, capitation taxes upon all engaged in a particular industry and a miscellaneous category of ‘*ad valorem*’-taxes. The first category included, among about a dozen other state monopolies, the monopoly on salt and the brewing of beer. The Roman government followed Ptolemaic practice and leased out the exclusive right of production of a specific product within a district to a guild (or an individual). The second category, the taxes upon tradesmen, was levied on persons engaged in a particular industry. Since all these men<sup>119</sup> were organized in trade-guilds, it was administratively quite easy for the officials to collect the tax. The tax was assessed per capita (usually called *χειρωνάξια*<sup>120</sup>) and the rates were determined on the basis of the expected revenue for each trade individually. The industries included in this category were mainly related to textile: e.g. weaving, dyeing, fulling and tailoring, but potters were also annually

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<sup>118</sup> Wallace, *Taxation in Egypt from Augustus to Diocletian*, 181-237 (*op. cit.* n. 99).

<sup>119</sup> However, it appears that women were also liable to the tax: in PSI IX 1055 V b the taxes on trades is paid by a female weaver (*γεργιάνα*).

<sup>120</sup> U. Wilcken, *Griechische Ostraka aus Ägypten und Nubien: ein Beitrag zur antiken Wirtschaftsgeschichte I* (Leipzig: Verlag von Giesecke & Devrient, 1899) 321-333.

charged. The third category of minor money-taxes was by far the most important one. The taxes included within this category were rather heterogeneous, sharing only one common denominator: the taxes were levied *ad valorem*. The best known of these taxes were a sales-tax of ten percent on sales of land, houses and slaves; and the *vicesima hereditatum et legatorum*, a tax of five per cent, that had to be paid by every Roman citizen upon any inheritance being left to him. Other items upon which taxes were levied included, among many others, the artworks of painters and the catch of fishers (both assessed at twenty-five percent). Wallace has compiled an extensive - though, probably not exhaustive - list of these minor taxes.<sup>121</sup>

As has become clear from the above, taxation in the Roman Empire was not only well-structured, but also highly complex. It is therefore very difficult to calculate the (annual) tax-revenue in Egypt during the Principate.<sup>122</sup> Isolated information on Egyptian contributions to Rome or its treasury - like the famous statement of Aurelius Victor that Egypt annually shipped twenty million *modii* of grain to Rome<sup>123</sup> - do not make things much clearer either.

However, in an admirable attempt to quantify the tax-revenue in Egypt under the Principate, Duncan-Jones has come up with the some interesting figures - even though we have to take into account a considerable margin of error. It

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<sup>121</sup> Wallace, *Taxation in Egypt from Augustus to Diocletian*, 214-237 (*op. cit.* n. 99).

<sup>122</sup> K. Harl, *Coinage in the Roman Economy, 300 B.C. to A.D. 700* (Baltimore/London: Johns Hopkins University Press, 1996) 235-237.

<sup>123</sup> Aurelius Victor, *Epitome de Caesaribus*, I.6: 'Huius tempore ex Aegypto urbi annua ducenties centena milia frumenti inferebantur.'

would go too far to repeat the whole calculation here, but the conclusions are too interesting to leave them unmentioned.<sup>124</sup> An *artaba* of wheat in this figure equals the ‘conventional’ eight drachmas. This was the median wheat price in the first century AD<sup>125</sup>:

	<i>Value in wheat (million artabas)</i>	<i>Value in money (million sesterces)</i>	<i>%</i>
<i>Grain revenue</i>	17.5	(140.0)	54.0
<i>Money-taxes on land</i>	(0.59)	4.7	1.8
<i>Tree-crops</i>	(2.11)	16.9	6.5
<i>Poll-tax and occupational taxes</i>	(2.5)	20.0	7.7
<i>Other money-taxes</i>	(9.7)	77.4	30.0
<i>Total</i>	32.4	259 <sup>126</sup>	100.0

An overwhelming majority of the revenue (62.3%) was levied on the land, this included the revenues from grain-land (in

<sup>124</sup> Duncan-Jones, *Money and government in the Roman Empire*, 47-53 (*op. cit.* n. 83).

<sup>125</sup> Duncan-Jones, *Structure and scale in the Roman economy*, 146 (*op. cit.* n. 52). Also see: R. Duncan-Jones, ‘The price of wheat in Roman Egypt under the principate’, *Chiron: Mitteilungen der Kommission für Alte Geschichte und Epigraphik des Deutschen Archäologischen Instituts* 6 (1976) 241-262.

<sup>126</sup> If the annual tax-revenue of Egypt during the Principate was somewhere between 220-300 million sesterces (using a margin of error of plus or minus 15%), Egypt would have made a sizeable contribution to the Roman treasury. Hopkins has estimated the average tax rate as 10% of the minimum gross product, which would amount to an annual total of 800 million or 900 million sesterces. The Egyptian contribution to the treasury would be between 24.4% and 37.5%. Cf. Hopkins, ‘Taxes and trade in the Roman Empire’, 117-120 (*op. cit.* n. 50); idem, ‘Rome, taxes, rents and trade’, 45-46 (*op. cit.* n. 50).

kind), tree-crops (in money) and supplementary charges to the basic land-tax (in money). Taxes other than the *tributum soli* provided the rest of the revenue (37.7%). However, we have to keep in mind that this figure is just a schematic overview, partly based on papyrological evidence, partly based on unverifiable propositions (the size of the population, the size of the cultivated land, the volume of trade, etc.). Apart from the figures, it shows us that the system of taxation during the Principate was a 'mixed system', where taxes were assessed in kind as well as in money.

In my opinion, it is clear that the tax on agricultural land fulfilled to a large extent the needs of the Roman government. Provinces renowned for their agricultural resources (like Egypt and Sicily) were taxed in kind to provide the army, the *plebs frumentaria* of Rome, the bureaucracy and the imperial court with cereals. Nor is it inconceivable that the government sold a part of the grain revenue on the free market.<sup>127</sup> Other provinces, famous for other natural resources (like the Spanish silver-mines), were taxed in money. This money was mainly spent by the Roman government in the purchase of military equipment, the provisioning of the army (if stationed in a province with poor agricultural resources), *donativa* for the army and the people of Rome, the construction of public buildings for the capital (public buildings in the provincial towns were often paid for by euergetists) and 'the periodic furnishing of material aid to

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<sup>127</sup> For the role of the Roman government in the grain trade see: L. Casson, 'The role of the state in Rome's grain trade', in: J.H. d'Arms en E.C. Kopff (red.), *The seaborne commerce of Ancient Rome: studies in archaeology and history* (Rome: American Academy in Rome, 1980) 21-33.

communities in times of crisis'.<sup>128</sup> In other words, the relatively rich tax-exporting provinces of the empire provided the tax-consuming parts with grain and coinage. The chief characteristic of the Roman system of taxation in the Principate was: variety.

## 2.2 *The organization of Roman fiscality*

The introduction of the census and land registers had considerable consequences for the organization of the tax system. In the Republic taxes were farmed ('sold') to contractors: *publicani* (sometimes organized in a group: *societas*). In this way the Roman government had tried to assure itself of a stable and predictable income. In exchange for a sum of money, the state gave the *publicani* the right to collect 'a tithe of the produce as tribute in kind'.<sup>129</sup> The contractors could make a considerable profit in this way: in fact, the system was an open invitation to corruption.

The introduction of the Augustan system with the provincial censuses and land registers had the great advantage that the state no longer had to use *publicani* to collect taxes: 'This was achieved by altering the whole basis of taxation from a proportional levy, where yield was unpredictable, to a fixed levy based on assessed property'.<sup>130</sup> Before the introduction of the land registers the land-tax was fixed as a percentage of the yield (the tithe was the most common rate). But now the newly acquired information

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<sup>128</sup> Garnsey and Saller, *The Roman Empire*, 56 (*op. cit.* n. 88).

<sup>129</sup> Millar, *The Roman Empire at its neighbours*, 93 (*op. cit.* n. 117).

<sup>130</sup> Jones, 'Taxation in antiquity', 165 (*op. cit.* n. 45).

made it possible to assess the *tributum soli* on a *per iugerum* basis.

Although in the reign of Augustus some direct taxes in kind were still being collected by *publicani*<sup>131</sup>, it is generally assumed that they lost importance early in the first century. The *publicani* were possibly completely eliminated from the collection of direct taxes late in Tiberius' reign, but - again - we are not in the possession of any conclusive evidence on this point. The role of the *publicani* in the collection of taxes was in most provinces taken over by the councils of the provincial cities<sup>132</sup>, who were accordingly supervised by the provincial administration. In Egypt, however, the town councils were only created at the beginning of the third century at the instigation of Septimius Severus, and the collection of taxes was therefore organized in a different way, since there were no councillors to interfere in fiscal matters.<sup>133</sup>

The ultimate responsibility for the financial administration in Egypt was in the hands of the prefect, the personal representative of the emperor, and in that function the Roman equivalent of the *διοικητής*, the minister of finance under the Ptolemies.<sup>134</sup> He possessed an extensive civil

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<sup>131</sup> Tacitus, *Annales* IV.6: at frumenta et pecuniae vectigales, cetera publicorum fructuum societatibus equitum Romanorum agitantur

<sup>132</sup> Jones, 'Taxation in antiquity', 165, 180-183 (*op. cit.* n. 45).

<sup>133</sup> For the responsibility on fiscal affairs of the Egyptian town councils, see: Bowman, *The town councils of Roman Egypt* (Toronto: A.M. Hakkert, 1971) 69-83.

<sup>134</sup> Cf. J.D. Thomas, 'Aspects of the Ptolemaic civil service: the dioiketes and the nomarch', in: H. Maehler and V.M. Strocka (edd.), *Das Ptolemäische Ägypten: Akten des internationalen Symposions, 27.-29. September 1976 in Berlin* (Mainz: Zabern Verlag, 1978) 187-194.



service in Alexandria, who delegated the fiscal policy of the government further down to the local level. Each nome was represented in Alexandria by a *έκλογιστής*, who received monthly reports from the *στρατηγός* of their respective nome about the progress of the collection. The *έκλογισταί* also made - partly on the basis of the received reports and partly on the basis of the water level of the Nile<sup>135</sup> - the annual assessment of taxes for their nome. At the local level the *στρατηγός* was responsible for the collection of taxes within his nome. The *στρατηγός* was informed about the fiscal possibilities of his subject population by a cadastral report, the *άπαιτήσιμον κατ' άνδρα* compiled by local officials. These officials were working on the village level and formed the key-stone of the financial administration in Roman Egypt.

But how were these taxes collected? For the collection of the most important tax in kind (on grain-land), the farmers were obliged to transport their yield as soon as possible to the village threshing floor, where the government's share of grain was taken apart under the supervision of officials. Then, the threshed grain was transported by the farmer himself (or his representative) to the village granary (*θησαυρός*) or to the granary of the nearby metropolis. After the cultivators had delivered the grain at the granaries, they received a receipt from a *σιτόλογος*, the official in charge of the granary, or one of his assistants. When a tax-receipt was issued to a farmer, the tax-payer's responsibilities concerning the grain-tax had come to an end. The *sitologi*, however, were not only responsible for the measurement of the grain and the issuing of receipts, but also for the

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<sup>135</sup> Lewis, *Life in Egypt under Roman rule*, 107-115 (*op. cit.* n. 76).

transport of the grain to Alexandria, the storage of next year's seed-grain for public lands and for the issuing of grain to government's employees.<sup>136</sup> The grain destined for shipment to Alexandria was transported via the Nile to the great granaries at Neapolis and Hermeneus, where it was stored until it was shipped to Rome by the *navicularii*, a guild of ship owners responsible for transporting revenue-grain from Alexandria to Rome.<sup>137</sup>

The collection of (direct) money taxes was organized in a completely different way. As was the case with the collection of the grain-revenue, the exact amount due to be paid by each nome was determined at the bureau of the *ἐκλογισταί* in Alexandria. This amount was communicated to the head of the nome, the *στρατηγός*, and this official subsequently selected a number of collectors (*πράκτορες*) by lot, who had been nominated by village officials on account of their financial capabilities. Since the *πράκτορες* were personally responsible for possible deficits, they had to be in the possession of some capital. Furthermore, the collectors chosen by lot could not refuse the office: the liturgy was compulsory.

At many locations it was possible for the tax-payers to make their payment at the local bank.<sup>138</sup> The tax-collectors were possibly present at a certain bank at specific times to

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<sup>136</sup> Wallace, *Taxation in Egypt from Augustus to Diocletian*, 37 (*op. cit.* n. 99).

<sup>137</sup> G. Rickman, 'The grain trade under the Roman Empire', in: J.H. d'Arms en E.C. Kopff (red.), *The seaborne commerce of Ancient Rome: studies in archaeology and history* (Rome: American Academy in Rome, 1980) 261-265.

<sup>138</sup> Cf. R. Bogaert, 'Les opérations des banques de l'Égypte romaine', *Ancient Society* 30 (2000) 136-179.

receive the taxes, while ‘the rest of their time was devoted to locating the more reluctant payers’, who did not voluntarily appear at the bank to fulfil their fiscal duties.<sup>139</sup> After the payment, the collectors issued a receipt to the payer (as was the case with the grain-tax). The collectors kept an accurate record of all received amounts, and this information was given every month to the *στρατηγός*, who forwarded these reports to the financial administration in Alexandria.

So, a large body of officials was responsible for the tax-collection. The ultimate responsibility was in the hands of the prefect, but the responsibility for ‘the administration of taxes in the nome as a unit was in the hands of the *strategos* and the *boule* in the third century.’<sup>140</sup> When the town councils were finally established in Egypt at the beginning of the third century, the general idea behind this was that the property-owning class became responsible for the collection of the taxes. The evidence indeed demonstrates that the *βουλή* was highly involved in fiscal matters: the town councillors did not only appoint officials<sup>141</sup>, but also became responsible for the collection themselves. The bouletic class (*curiales*) could roughly be divided into three hierarchic groups, though not all members of this class were part of the town council.<sup>142</sup> The *susceptores* or *ὑποδεκταί* were the

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<sup>139</sup> Wallace, *Taxation in Egypt from Augustus to Diocletian*, 296 (*op. cit.* n. 99).

<sup>140</sup> Bowman, *The town councils of Roman Egypt*, 69 (*op. cit.* n. 133).

<sup>141</sup> *Ibidem*, 75 (*op. cit.* n. 133).

<sup>142</sup> Bagnall, *Egypt in Late Antiquity*, 61 (*op. cit.* n. 62); H. Geremek, ‘Les πολιτευόμενοι égyptiens sont-ils identitiques aux βουλευταί?’, *Anagennesis : a papyrological journal* 1 (1980-1981) 231-247. However, see: C. Lepelley, ‘Quot curiales, tot tyranni. L’image du décurion oppresseur au Bas-Empire’, in: E. Frézouls (ed.), *Crise et redressement dans les*

youngest town councillors, who were in charge of the collection of (direct) taxes. They usually worked in groups and were responsible for a specific item.<sup>143</sup> The *susceptores* did not have to visit each tax-payer individually, since the payments were collected in the villages by local collectors under the supervision of the *praepositus pagi* and his staff.<sup>144</sup> The *praepositus* himself was also member of the bouletic class, but - although he had the ultimate responsibility for the (financial) administration of his *pagus* - he resided in the city, leaving the work to his staff.

The *susceptores* were supervised by an *exactor*, who was in first instance appointed by the imperial authorities, but from 323 onwards he was appointed by the town council. The office of *exactor* replaced the *στρατηγός* as head of the nome.<sup>145</sup> It was introduced in Egypt in 309 and was fulfilled by a local resident (while the office of *στρατηγός* had always been in the hands of an important personage 'out of town').<sup>146</sup> The specific task of the *exactor* (or: *exactor civitatis*) was, in first instance, concerned with the collection of arrears, though his responsibilities were soon extended to a wide range of fiscal matters. The third group was formed by the

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*provinces européennes de l'Empire (milieu du IIIe-milieu du IVe siècle ap. J.-C.): actes du colloque de Strasbourg, décembre 1981* (Strasbourg: AECR, 1983) 143-145.

<sup>143</sup> Jones, *The later Roman Empire, 284-602*, 456 (op. cit. n. 7).

<sup>144</sup> *Infra*, p. 64.

<sup>145</sup> J.D. Thomas, 'The earliest occurrence of the *exactor civitatis* in Egypt (P. Giss. Inv. 126 recto)', in: N. Lewis (ed.), *Papyrology* (Yale Classical Studies 28; Cambridge: Cambridge University Press, 1985) 115-125; cf. P.J. Sijpesteijn, 'The meanings of ἦτοι in the papyri', *Zeitschrift für Papyrologie und Epigraphik* 90 (1992) 246-250.

<sup>146</sup> Bagnall, *Egypt in Late Antiquity*, 61 (op. cit. n. 62)..

*principales* and included, amongst other distinct persons, the ten highest-ranking members of the curial class: the *decemprimi* or *δεκάπρωτοι*. They were experienced men at the end of their career belonging to the highest echelons of the *ordo decurionum*. Their exact function is nowhere described, but Claude Lepelley has suggested that they possibly formed the council's executive committee and, besides, played an important role in the distribution of the fiscal burden over the tax-payers.<sup>147</sup>

At the end, the *susceptores* occupied the most vulnerable position within the system of taxation. The *susceptores* were, in contrast with the *exactores* and *principales*, after the collection personally responsible for the possible deficits.<sup>148</sup> The position of the *exactor* was, on the other hand, so strong that the emperor Theodosius I issued a law in 386 as a result of which *exactores* were not allowed to hold office for longer than a year, so they could not permanently take advantage of their position of power.<sup>149</sup>

After the introduction of the town councils in Egypt, the councillors were clearly closely involved in the financial administration of the nome and the collection of taxes.<sup>150</sup>

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<sup>147</sup> Lepelley, 'Quot curiales, tot tyranni', 145 (*op. cit.* n. 142).

<sup>148</sup> J.A. Boek, *Met vallen en opstaan... de ordo decurionum in de Late Oudheid* (The Hague, 2004) 16 [unpublished article]. Some consequences, when one failed to collect the taxes in full, are summed up by Bagnall, *Egypt in Late Antiquity*, 57 (*op. cit.* n. 62).

<sup>149</sup> *Codex Theodosianus*, XII.6.22 (386).

<sup>150</sup> It appears that the curiales had ceased to exist in the Eastern Roman Empire somewhere in the mid-sixth century, as is also implied by the next passage written by John Lydus on the wearing of togas: 'this custom continued in the provinces as long as the *curia* ruled the cities; but when they were abolished togas too disappeared.' (John Lydus, *De magistratibus populi romani*, I.28)

However, the prestige of the curial class was already decreasing from the reigns of Diocletian and Constantine onwards<sup>151</sup> and the most prestigious members of the *ordo decurionum* took flight to higher positions in the provincial and imperial administration.<sup>152</sup> In fact, this meant that the financial administration of the metropoleis and their hinterland was left to the less substantial *susceptores*, who risked financial ruin if the population was reluctant to pay their taxes.

Although these problems already started in the course of the third century, the situation in the mid-fourth century (the period discussed in the next chapter) was not so dramatic yet. In this period, the *susceptores* were responsible for the collection of all sorts of taxes, but they did not carry out the collections themselves. In some cases it is known that the *susceptores* acted as *σιτολόγοι* and issued receipts to those who transported the tax-grain to the local harbour (e.g. at Karanis: *infra* § 3.5).

When one compares the situation of the later Roman Empire with that of the early Principate, it becomes clear that the system of taxation was more hierarchically

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<sup>151</sup> W. Schubert, 'Die rechtliche Sonderstellung der Dekurionen (Kurialen) in der Kaisergesetzgebung des 4.-6. Jh.', *Zeitschrift der Savigny-Stiftung für Rechtsgeschichte, Romanistische Abteilung* 86 (1969) 287-288.

<sup>152</sup> Jones, *The Later Roman Empire, 284-602, 737-757* (*op. cit.* n. 7); J.H.W.G. Liebeschuetz, *Antioch: City and Imperial Administration in the Later Roman Empire* (Oxford: Clarendon Press, 1972) 174-186; M. Whittow, 'Ruling the late Roman and early Byzantine city: a continuous history', *Past & Present* 129 (1990) 9. The emperors desperately tried to keep the *curiales* in their cities, but the legal sources are so confusing and conflicting on this point, that the attempt failed: Boek, *Met vallen en opstaan...*, 10-11 (*op. cit.* n. 148).

organized in Late Antiquity. From the introduction of the town councils onwards, the councillors (and in particular the *susceptores*) were responsible for the success of the collection in their nome. Though, they were not involved in the actual collection: at the village level the comarchs distributed the fiscal burden over the population and were responsible for the collection, whilst (the staff of) the *praepositus pagi* was responsible for the collection in all the villages located within the *pagus*. These men subsequently transferred the tax-yield to the *susceptores*, who sent the collected goods to Alexandria or another destination (e.g. an encamped military unit in the nome). Before the introduction of the town councils, the Alexandrian officials communicated the expected amount of goods to the heads of the nome, who ordered their staff (including those selected by lot) to collect and dispatch the demanded amount to Alexandria. In short, the fiscal-organization of the later Roman Empire was well-structured, but in contrast with the situation under the Principate, it was perhaps *over-structured*<sup>153</sup> with too many people carrying responsibility, whereas they were in actual fact unable to cope with that responsibility.

### 2.3 *The later Roman system of taxation: iuga and capita*

When Diocletian ascended to the throne in 284, he inherited an empire that was slowly recovering from one of the most

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<sup>153</sup> Cf. Carrié and Rousselle, *L'Empire romain en mutation des Sévères à Constantin*, 651 (*op. cit.* n. 13): 'l'État antique tardif, il s'est doté d'un appareil étatique centralisé et fortement hiérarchisé.'

severe crises in its history. In the half century before his accession there had approximately been 35 emperors<sup>154</sup>, who had spent most of their reign fighting just as many (or more) usurpers. The depth of the crisis can be indicated by the fact that only one of the legitimate emperors in this period died a natural death: Claudius II Gothicus fell victim to an epidemic of plague in 270 after a reign of almost two years. Nearly constant civil warfare (with separatist states emerging in Gaul and Palmyra) and the permanent threat of invading Germans, Goths and Persians on the northern and eastern frontiers of the empire caused an economic crisis with a tremendous inflation and a collapsing currency.<sup>155</sup> It appeared that the financial administration of the Roman Empire only operated in times of peace: the budget of the government ‘was adequate so long as no loose connection developed between tax and pax.’<sup>156</sup>

Diocletian tried to create order out of chaos by administrative, military and fiscal reforms: ‘The huge army which he built up effectively defended the frontiers and suppressed internal disorders. [<sup>157</sup>] His enlarged bureaucracy administered justice more promptly and vigorously, saw to

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<sup>154</sup> Cf. Southern, *The Roman Empire from Severus to Constantine*, 14-133 (*op. cit.* n. 54).

<sup>155</sup> The monetary developments during the crisis of the third century are meticulously described in J.-P. Callu, *La politique monétaire des empereurs romains de 238 à 311* (Paris: De Boccard, 1969). Also interesting in this respect is: A.H.M. Jones, ‘Inflation under the Roman Empire’, in: *idem*, *The Roman economy*, 187-227 (*op. cit.* n. 45).

<sup>156</sup> MacMullen, *Roman governments response to crisis*, 129 (*op. cit.* n. 11).

<sup>157</sup> A recent, thorough discussion of the implications of the Diocletian reforms for the late Roman army can be found in: Nicasie, *Twilight of empire*, 23-81 (*op. cit.* n. 17). Also see: Jones, *The later Roman Empire*, 284-602, 607-686 (*op. cit.* n. 7).



the execution of much-needed public works, and collected the necessary revenue with ruthless efficiency. The new fiscal system ensured that the burden was more or less equitably apportioned.<sup>158</sup> However, Lactantius complained that due to the Diocletianic enlargement of the army and the administration the number of recipients began to exceed that of the taxpayers<sup>159</sup> and although this point of view is undoubtedly piled on rhetoric exaggeration, the complaint was perhaps not entirely unjustified. In the remainder of this paragraph I will therefore discuss the system of taxation in the later Roman Empire.

From the reign of Septimius Severus onwards, the requisitions in kind destined for the military (the *annona militaris*) were levied as an irregular superindiction. Diocletian's tax reforms rationalized these requisitions and made them into a regular event again. The exact date of his reforms has for a long time been subject of debate, but it can now in all probability be dated in 287.<sup>160</sup> Though, the date of the reform has not been the only point of discussion: although the Diocletianic system of taxation is discussed by many scholars for over a century, there is still no consensus 'on many major and still more minor points of interpretation.'<sup>161</sup> Besides the (re-)introduction of a regular levy, Diocletian also introduced a new procedure to calculate

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<sup>158</sup> Jones, *The later Roman Empire, 284-602*, 67 (*op. cit.* n. 7).

<sup>159</sup> Lactantius, *De Mortibus Persecutorum*, VII.3: 'adeo maior esse coeperat numerus accipientium quam dantium'.

<sup>160</sup> J.-M. Carrié, 'Diocletien et la fiscalité', *Antiquité tardive* 2 (issue title: *La tétrarchie (293-312): histoire et archéologie*) (Paris: Brepols, 1994) 34-37. Cf. e.g. R. Rémondon, *La crise de l'Empire romain de Marc-Aurèle à Anastase* (Paris: Presses Universitaires de France, 1964) 58.

<sup>161</sup> MacMullen, *Roman governments response to crisis*, 137 (*op. cit.* n. 11).

the tax burden of an individual, a city, a province or any other administrative subdivision. This procedure has become known in the modern literature as the ‘*capitatio-iugatio*’ system.<sup>162</sup> The term is derived from *capitatio* or *iugatio*: *iuga vel seu* or *et capita* (in Greek there existed a single word for ‘assessment unit, whether *iugum* or *caput*’: ζυγοκεφαλή).<sup>163</sup> So, the system was based on two units of measurement, the *caput* and the *iugum*, but these units were not identical to a particular size of land or a certain number of people, but the terms denoted ‘fictitious parameters for the calculation of the varying tax potential of land, people, and animals’.<sup>164</sup>

The new system allowed a comparatively universal procedure of levying, but it was not uniformly applied to all parts of the empire: in some provinces taxes were levied on the combined assessments on the land and its inhabitants (human and animal), while in other provinces - like in Egypt - payments were only assessed on land. These differences are, for example, demonstrated by an often-quoted law on the assessment of the *vestis militaris* in different parts of the empire issued in 377 by the emperors Valens, Gratian and Valentinian II: ‘The provinces of Thrace shall contribute one outfit of military clothing for each 20 land tax units (*iuga*) or personal tax units (*capita*). Scythia and Moesia, meanwhile, shall make an annual payment of one outfit for each 30 land

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<sup>162</sup> The best introduction to the complex material can be found in A.H.M. Jones, ‘Capitatio and iugatio’, in: idem, *The Roman economy*, 280-292 (*op. cit.* n. 45). Even though his conclusions on Egypt are not valid; cf. R.S. Bagnall, ‘P. Oxy. XVI 1905, SB V 7756 and fourth-century taxation’, *Zeitschrift für Papyrologie und Epigraphik* 37 (1980) 189 n.9.

<sup>163</sup> Jones, ‘Capitatio and iugatio’, 284 (*op. cit.* n. 45).

<sup>164</sup> E. Pack, ‘Capitatio-iugatio’, in: H. Cancik and H. Schneider (edd.) *Brill’s New Pauly: Antiquity* (Leiden: Brill, 2007) [e-text].

tax (*iuga*) or personal tax units (*capita*). Throughout Egypt and the districts of the Orient one outfit shall be furnished for each 30 land tax units (*iuga*).<sup>165</sup>

It appears from this law that the *vestis militaris* was levied in Thrace, Scythia and Moesia on land and on the people cultivating the land, while in Egypt the cultivators were not charged and, hence, the tax was only assessed on units of land. Thus, the main characteristic of the empire's tax structure in Late Antiquity was identical to that of the Principate: the empire was fiscally united by diversity.

According to A.H.M. Jones 'the virtue of the new system lay in its simplicity'.<sup>166</sup> This point of view was appropriately nuanced by Goffart, since according to him 'such a view owes more to modern summary accounts of the "system" than to an appreciation of how complex taxation always is.'<sup>167</sup> As announced above, the complexities of the later Roman system of taxation will be demonstrated in the next chapter; consequently this chapter depicts the system 'simpler' than it was in actual fact. In my opinion, this justifies citing Jones' explanation of the tax system here:

It [sc. the new system] provided a ready means of assessing the incidence of the diverse levies which the government required to raise, in wheat, barley, meat, wine, oil, clothing, horses, camels, mules, oxen, recruits, labourers and what not. Each taxpayer was assessed at so many *iuga*

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<sup>165</sup> *Codex Theodosianus*, VII.6.3 (377), translation by C. Pharr.

<sup>166</sup> Jones, *The later Roman Empire*, 284-602, 65 (*op. cit.* n. 7). This was also the point of view of J.L. Teall, 'The age of Constantine: change and continuity in administration and economy', *Dumbarton Oaks papers* 21 (1967) 33.

<sup>167</sup> Goffart, *Caput and colonate*, 6 (*op. cit.* n. 79).

and so many *capita*, the assessment of each city comprised the total of its taxpayers, that of each province the total of its cities, and that of each diocese the total of its provinces. When the praetorian prefecture had calculated that the army required so many *modii* of wheat and of barley, so many pounds of meat, so many *sextarii* of wine and of oil, so many cloaks and tunics, it involved a simple arithmetical calculation to determine how much each *iugum* (or in the developed system each *iugum* or *caput*) must produce, and to draw up the demand notes for each province, city and individual taxpayer accordingly.<sup>168</sup>

Jennifer Sheridan summarized the system simply as follows: ‘Diocletian divided land into units, computed the needs of the Empire, and made each land unit responsible for its share of the burden.’<sup>169</sup> (However, this vision is inaccurate and too simplistic: first of all it appears from this that Diocletian - or: the emperor - determined the fiscal burden himself, while the praetorian prefect and his staff were responsible for that<sup>170</sup>; and secondly, she completely leaves aside the question of personal tax units, probably because she solely focused on Egypt.)

Although the new fiscal design appears to have been quite simple and straightforward, there are some serious problems with interpreting the system. Most important are the questions on what *iugum* and *caput* actually were and how they worked: e.g. If an *iugum* did not equal a defined size, can we say anything on the average size of an *iugum*? What was a

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<sup>168</sup> Jones, *The later Roman Empire, 284-602*, 65 (*op. cit.* n. 7).

<sup>169</sup> J.A. Sheridan, *Columbia Papyri IX: The vestis militaris codex* (Atlanta: Scholars Press, 1998) 87-88.

<sup>170</sup> Jones, *The later Roman Empire, 284-602*, 448-449 (*op. cit.* n. 7).

*caput* exactly? Why is the term κεφαλή used in Egyptian papyri, while personal tax units did not seem to have existed in Egypt? *Et cetera*.

During the Principate the fiscal burden was distributed according to financial capability: the richest members of a community took responsibility for paying a substantial part of the tax burden. In this way, the rich could also act as benefactors by, e.g., paying for a certain tax on behalf of the whole community.<sup>171</sup> However, this display of wealth became increasingly difficult as a result of the economic crisis in the third century and the collapsing currency. According to Goffart there was no longer an objective measure of individual wealth available because of this ‘collapse of money values’: only the Diocletian reforms provided a new ‘objective means of assessing wealth for purposes of contributing to the *annona*’.<sup>172</sup> Goffart was wrong in believing that an objective measure for individual wealth was no longer in existence (for we have seen above that the possession of land was the most important source of wealth; and not the possession of money<sup>173</sup>), but the economic chaos left behind by the crisis of the third century was undoubtedly the main cause for reorganizing the Roman fiscal landscape.

To use Goffart’s terminology: Diocletian introduced the *iugum* and *caput* as fictitious parameters ‘to restore a measure

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<sup>171</sup> The role of euergetists changed considerably in Late Antiquity, see: J.-U. Krause, ‘Das spätantike Städtepatronat’, *Chiron: Mitteilungen der Kommission für Alte Geschichte und Epigraphik des Deutschen Archäologischen Instituts* 17 (1987) 1-80.

<sup>172</sup> Goffart, *Caput and colonate*, 31 (*op. cit.* n. 79).

<sup>173</sup> *Supra*, p. 28.

of objectivity to assessment procedures'.<sup>174</sup> The *iugum* (literally 'a yoke of oxen', though the meaning of the term was soon transferred into 'the area which a single yoke of oxen could plough'<sup>175</sup>) was the common name for the land tax-unit in the new fiscal system, varying in quantity according to its use and quality as is illustrated by a passage from the Syro-Roman Lawbook:

The measure of the *iugum* was defined in the days of emperor Diocletian and was made statutory: 5 *iugera* which make 10 *plethra* of vine were equated to one *iugum*, and 20 *iugera* of sowed land which make 40 *plethra* give the *annona* of one *iugum*; 220 *perticae* of old olive trees give the *annona* one *iugum*, 450 *perticae* of mountain (olive trees) give (the *annona* of) one *iugum*. Thus also the land that is of less value, as in the hills: 40 *iugera* which make 80 *plethra* give (the *annona* of) one *iugum*. If moreover they were estimated or booked as 'third category' 60 *iugera* making 120 *plethra* give (the *annona* of) one *iugum*.<sup>176</sup>

The *iugum* was thus applied as an abstract measure to convert the demand of the government in traditional measures (in the case above in *iugera*, *plethora* and *perticae*), while it provided - at the same time - a possibility to make a distinction on the basis of quality of land: e.g. 40 *iugera* of second-class quality land made up one *iugum*, while one

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<sup>174</sup> Goffart, *Caput and colonate*, 32-33 (*op. cit.* n. 79).

<sup>175</sup> Duncan-Jones, *Structure and scale in the Roman economy*, 200 (*op. cit.* n. 52).

<sup>176</sup> *Leges saeculares* 121 (*Fontes Iuris Romani Anteiusinianii*<sup>2</sup> II, 795-796; translated by W. Goffart).

*iugum* was also equalled with 20 *iugera* of first-class quality land. Hence, the ‘size’ of an *iugum* could differ substantially.

It is rather difficult to say something conclusive about the average ‘size’ of a *iugum*, especially since there are two historiographical extremes in this discussion. On the one hand A.H.M. Jones and Jean-Michel Carrié reached roughly the same conclusions by respectively calculating the approximate size on 100 *iugera* (on the basis of epigraphic evidence with a geographical focus on Asia Minor) and  $96 \frac{1}{4}$  *aroura* (on the basis of legal and papyrological evidence, geographically biased towards Egypt), which is roughly the same amount of land.<sup>177</sup> As we will see below, the interpretation of Jones is possibly incorrect, but - in my opinion - Carrié has ingeniously calculated the approximate size of a *iugum* on the basis of *P. Oxy.* 1905 and *Codex Theodosianus* VII.6.3 correctly.

On the other hand, there is the work of Richard Duncan-Jones, who had a completely different point of departure: a fourth-century treatise on weights and measures written by the Cypriot bishop Epiphanius, wherein a *iugum* was equalled with 12 or 13 *iugera*.<sup>178</sup> Besides, Duncan-Jones noticed that the size of a tax-unit in a fourth-century land-register from southern Italy was exactly 12.5 *iugera*.<sup>179</sup> On the basis of a few

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<sup>177</sup> A.H.M. Jones, ‘Census records of the later Roman Empire’, in: idem, *The Roman economy*, 230 (*op. cit.* n. 45); Carrié, ‘Observations sur la fiscalité du IV<sup>e</sup> siècle’, 119 (*op. cit.* n. 63).

<sup>178</sup> Duncan-Jones, *Structure and scale in the Roman economy*, 222 (*op. cit.* n. 52).

<sup>179</sup> *Ibidem*, 202; referring to *CIL* X 407.1.11 (323). In the register 4 ‘M’ is equalled to 50 *iugera*, and  $50:4 = 12.5$  *iugera* per ‘M’. The tax-unit in (southern) Italy during Late Antiquity was the *millena* and in fifth century sources taxes were levied in *iuga* or *millenae*, see: *Novellae of*

other sources he concluded that a *iugum* in the later Roman Empire would have been between 11 and 16 *iugera*. So, although the *iugum* was no defined size, the difference between the most burdensome *iugum* (comprising the smallest amount of land) and the least burdensome one (the biggest amount of land) was not very substantial according to Duncan-Jones.

But how does he then explain the conflict with the information given in the Syro-Roman Lawbook where a *iugum* was equal to a plot sized between 20 to 60 *iugera* of land? According to Duncan-Jones, a metrological error in the text might be responsible for the conflicting figures. This *testimonium paupertatis* is - in my opinion - not very convincing, even though an old manuscript of the Syro-Roman Lawbook (dating from ca. 1210) may show that the land-area defined is smaller than supposed.<sup>180</sup>

His comments on Jones' interpretation of the census inscription from Thera (Asia Minor) are unsatisfactory either.<sup>181</sup> This inscription contains a list of ten farmsteads possessed by the heirs of one Paregorius. After the name of each farm the amount of arable land (in *iugera*), vineyard (in *iugera*) and the number of olive-trees is tabulated. At the end of entry 3 (farm C) the words: 'they make  $1\frac{1}{2}\frac{1}{3}\frac{1}{46}$  *iuga* or *capita*' (or: 1.8551 *iuga* or *capita*) have been inserted; at the end of entry 4 (farm D) is written in curious fractions: 'it makes 0.2367 *iuga* or *capita*' (possibly restored correctly by Duncan-Jones to 1.2367 *iuga*) and on the right margin

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*Majorianus* 7.16 (458). The tax-unit of 12.5 *iugera*, the *millena*, was likely to be equal to the *iugum*.

<sup>180</sup> *Ibidem*, 210 (addendum).

<sup>181</sup> *IG* XII.III 343.



between entries 7 and 8 (farm G and H) is inserted a *iugum* and *capita*-total of 8.0222. However, in his calculation, Duncan-Jones did not use the combined figures of entries 7 and 8 (164 *aroura* of arable land; 38 *aroura* of vineyard and 304 olive-trees), but erroneously used the figures tabulated for entry 6 (farm F): 60 *iugera* of arable land, 50 *iugera* of vines and 143 olive-trees.<sup>182</sup> Therefore, his conclusion that a *iugum* was in all three cases about the size of 15 *iugera* is incorrect. Instead, the combined figures for farms G and H imply that the size of a *iugum* was approximately 30 *iugera* in this case. Let us assume that there was no misleading intention involved with this error, but that it was an unfortunate mistake, which coincidentally supported his argument.

However, A.H.M. Jones has interpreted this text in a rather different way (after all his *iugum* was to be equated with 100 *iugera* of arable land or 24 *iugera* of vineyard or 480 olive-trees and not with 15 or 30 *iugera*). How did Jones come up with such a large figure? The ten farms were headed under three different owners: farms A-D were property of Euphrosyne; farm E was possessed by Paregorius; and farms F-J were owned by Euporia, Paregorius and Sophronius. Jones interpreted the abovementioned *iugum* and *capita*-figures as applying to the property of the owner.<sup>183</sup> So, for example, 1.8551 *iuga* was the total for all four farms possessed by Euphrosyne. This does also explain the small figure for the second entry (raised by Duncan-Jones by one *iugum*), since this included only  $3 \frac{1}{50}$  *aroura* arable land, 30 olive-trees and

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<sup>182</sup> Duncan-Jones, *Structure and scale in the Roman economy*, 204 (*op. cit.* n. 52).

<sup>183</sup> Jones, 'Census records of the later Roman Empire', 229 (*op. cit.* n. 45).

11 animals. The only problem with this interpretation is that the figure for farmstead E was given at the entry of farm D. Anyway, the interpretation of A.H.M. Jones seems to be more plausible than that of Duncan-Jones, but scholars have not come to an agreement yet.

But why would it not be possible that the 'size' of a *iugum* differed substantially between different parts of the empire (and changed over time)? In the discussion above there was only one constant characterizing the Roman system of taxation: diversity. Why then would there be an approximately uniform *iugum* in Late Antiquity? I do not see any reason for this assumption. Would this mean that an *iugum* assessed in southern Italy was approximately eight times more burdensome than an *iugum* in Egypt? Not necessarily. Although I do not have found any evidence for this, it could be expected that the burden of an *iugum* differed - just like the size - per diocese, even though it is implied by the above-mentioned law on the *vestis militaris* that the system was to an (unknown) degree standardised.

However, the *iugum* is just one side of the coin: the *caput* is - if possible - even the more difficult term of the two: 'None other [sc. than the term *caput*] has aroused greater inventiveness on the part of modern commentators or occasioned them greater distress.'<sup>184</sup> Goffart himself was

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<sup>184</sup> Goffart, *Caput and colonate*, 41 (*op. cit.* n. 79). Also see the enumeration of possible meaning (as interpreted by scholars) in: Hildesheim, *Personalaspekte der frühbyzantinischen Steuerordnung*, 177 (*op. cit.* n. 80): 'die Einheit der menschlichen Arbeitskraft; der Wert der Arbeitskraft eines Mannes; das einem Bauern inkorporierte iugum; die zum Lebensunterhalt einer Bauernfamilie notwendige menge Land respektive der Ertrag dieses Landes; diejenige Menge Bodenertrages, die pro Kopf der Landbevölkerung angefordert wird; einen

perhaps the most creative interpreter of the term, distinguishing three different - but compatible - meanings of the term.<sup>185</sup> The first meaning of a *caput* was an entry in a tax-register: the individual declaration of taxable property.<sup>186</sup> Secondly, it could be an 'unsecured share of assessment': 'The *caput* in this sense was the "heading" of someone who had sufficient resources to be a contributor to taxation to the amount of one or more assessment shares, but who did not own enough real property to be worth assessing through a detailed *professio* converted into *iuga*.'<sup>187</sup> In my opinion, Goffart referred at this place to what is called *capitula* by A.H.M. Jones.<sup>188</sup> Since indivisible objects, like recruits or garments, could not always be assessed on individuals, humble tax-payers were clubbed together to produce 'one recruit' or 'one garment' (while wealthy landowners were possibly responsible for paying more than one recruit). Such consortiums of small landowners were called *capitula*, their individual share was probably called a *caput*.

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individueller Titel in den Steuernregistern, bestehend aus dem Namen des Pflichtigen und der Deklaration seines zu versteuernden Vermögens [...]; eine Einheit zur Veranlagung von Menschen und Tieren gemäß der Arbeitskraft [...]; ein Kapital, wobei die *capitatio* dementsprechend die Verzinsung desselben sei.'

<sup>185</sup> Goffart, *Caput and colonate*, 41-65 (*op. cit.* n. 79).

<sup>186</sup> Cf. A. Cérati, *Caractère annonaire et assiette de l'impôt foncier au Bas-Empire* (Paris: Librairie générale de droit et de jurisprudence, 1975) 431.

<sup>187</sup> Cf. R. Rémondon, 'La date de l'introduction en Égypte du système fiscal de la capitatio', in: D.H. Samuel, *Proceedings of the twelfth international congress of papyrology* (Toronto: Hakkert, 1970) 435; Bagnall, 'P. Oxy. XVI 1905, SB V 7756 and fourth-century taxation', 190-194 (*op. cit.* n. 162).

<sup>188</sup> Jones, *The later Roman Empire*, 284-602, 65, 615-616 (*op. cit.* n. 7).

The third meaning in Goffart's interpretation is the most common one: the *caput* was a 'human or animal component in the formula of assessment'. The *capitatio* covered human beings (including *coloni* and agricultural slaves) as well as livestock.<sup>189</sup> The *caput* was therefore a personal tax-unit, in contrast with the land tax-unit represented by the *iugum*. Although the *capitatio* was assessed on persons, it was strictly speaking no late Roman poll-tax or continuation of the *tributum capitis* levied during the Principate.<sup>190</sup> (However, in some periods and some parts of the empire some sort of poll-tax was levied: 'dans un groupe de documents jusqu'à maintenant exclusivement oxyrhynchites [...] les citoyens résidents paient un impôt qui porte le nom d'*épiképhalaion poléôs* sans rien avoir d'une taxe municipale.'<sup>191</sup> We are ignorant on many aspects of this 'urban head-tax', which was paid in money and has only been attested in the papyri between 297/298 to 319/320. It is, for example, unknown who were liable to the tax (possibly inhabitants of Oxyrhynchus without the Oxyrhynchite 'citizenship'<sup>192</sup>). Since a number of the tax-receipts give the occupation of the payer, it has also been suggested that the *ἐπικεφάλαιον πόλεως* was the precursor of the later Roman trade-tax, the *χρυσάργυρον* (*infra*, p. 136-138).)

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<sup>189</sup> Jones, 'Capitatio and iugatio', 281-282 (*op. cit.* n. 45).

<sup>190</sup> Cf. G. Schieman, 'Capitatio', in: H. Cancik and H. Schneider (edd.) *Brill's New Pauly: Antiquity* (Leiden: Brill, 2007) [e-text].

<sup>191</sup> J.-M. Carrié, 'L'Égypte au IV<sup>e</sup> siècle: fiscalité, économie, société', in: R.S. Bagnall (ed.), *Proceedings of the sixteenth international congress of papyrology, New York, 24-31 July 1980* (Chico: Scholars Press, 1981) 443.

<sup>192</sup> Bagnall, *Egypt in Late Antiquity*, 154 (*op. cit.* n. 62).

Even if Diocletian introduced the *capita* on human beings and animals in first instance as a ‘capitation-like’ money tax based on the earlier *tributum capitis*, it soon turned out to be not very useful, since ‘the value of money was depreciating so rapidly.’<sup>193</sup> However, land and men had always been taxed in the Roman Empire and it was therefore perfectly logical that *iuga* and *capita* were both used for the collection of taxes from the reign of Diocletian onwards. If the *capitatio* was not a poll-tax levied in money - no longer desirable as a result of the collapsed currency - it had to be collected in kind. In this way, the total assessment of an estate could be formed by adding the *iuga* of land and *capita* of persons and animals together, resulting in the term ζυγοκεφαλή.

It is now time to turn our attention briefly to the system as it was applied in Egypt. In the law on the *vestis militaris* above, we have seen that the land of Egypt was solely assessed in *iuga* (*Codex Theodosianus* VII.6.3: ‘per Aegyptum et Orientis partes in triginta terrenis iugis’). The term *iugum*, however, cannot be found in the papyri. This absence from the sources can be explained by the fact that the laws were issued by the imperial administration in Constantinople. The praetorian prefect issued a general law which was accordingly sent to the heads of the provincial administration in a number of dioceses (in the case of Egypt it was sent to Alexandria). There, the text was adapted to the traditional measures prevailing in that part of the empire. Hence, the *iuga* in the original text written in Constantinople were converted into *aroura* in Egypt, just as they were converted to *millena* in Italy

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<sup>193</sup> Jones, ‘Capitatio and iugatio’, 292 (*op. cit.* n. 45).

or *centuria* in Africa.<sup>194</sup> So instead of *iuga*, the *aroura* was used for computing rates of taxation in Egypt.

However, in an important papyrus, which is closely related to the archive of Papnuthis and Dorotheus (SB V 7756) and therefore included in the fiscal inventory below (§ 3.4), the rates are not computed in *iuga*, but in a unit called κεφαλή: the Greek term for the Roman *caput*. The use of this term has been the subject of considerable controversy and there is no agreement on the term yet.<sup>195</sup> If the Egyptian land was solely assessed in land tax-units (whether in Diocletianic *iuga* or traditional *aroura*), what would then be the meaning of the term κεφαλή?

The text can be dated on 27 September 359 and consists of two parts written by different hands. The first part (lines 1-12) is a list of a number of minor taxes each followed by the number of myriads of *denarii* due on each κεφαλή. In the last lines of the first part of the text, the total for one κεφαλή has been given (383.5 myriads of *denarii*) followed by: ‘ὕ(πέρ) κεφ(αλή) α C’’, (γίνεται) (δην.) (μυρ.) υν.<sup>196</sup> (‘That makes 450 myriads of *denarii* for 1 1/6 κεφαλή.’) The second part (lines 13-24) is a tax-receipt from the *praepositus pagi* Eulogius issued to Philadelphie, wherein is stated that she has paid her complete share, i.e. the taxes listed in the first part of the text.

<sup>194</sup> Carrié, ‘Observations sur la fiscalité du IVe siècle’, 121 (*op. cit.* n. 63).

<sup>195</sup> The most important publication in respect to this discussion is: Bagnall, ‘P. Oxy. XVI 1905, SB V 7756 and fourth-century taxation’, 185-195 (*op. cit.* n. 162); but also see: Carrié, ‘L’Egypte au IVe siècle: fiscalité, économie, société’, 439-441 (*op. cit.* n. 191).

<sup>196</sup> SB 7756, l. 11.

It would go too far to set out the whole discussion on the possible meanings of *κεφαλή* here, and this discussion - with useful references - has also been elaborately described in an article by Roger Bagnall.<sup>197</sup> In my opinion, this article could be considered as decisive in the debate. Therefore, I would like to follow the opinion of Bagnall that the term *κεφαλή* could best be interpreted as 'a means, however rough, of measuring landed property. [...] The *kephale* is thus an abstract measure - though not a unit - of landed wealth.'<sup>198</sup> The option that the *κεφαλή* was essentially a capitation tax on human beings offered by H.I. Bell, the editor of the *editio princeps* of the text, and in fact also by A.H.M. Jones can easily be refuted.<sup>199</sup> First, we have seen above that women were exempted from paying a poll-tax in Egypt and since the taxpayer in SB 7756 was a woman, it is almost impossible that a *κεφαλή* represents an individual tax-payer for capitation purposes. A second argument is based on the use of the term *ὑπερ γενήματος* in line 14 of the text, 'a phrase which can

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<sup>197</sup> Bagnall, 'P. Oxy. XVI 1905, SB V 7756 and fourth-century taxation', 188-195 (*op. cit.* n. 162).

<sup>198</sup> *Ibidem*, 194.

<sup>199</sup> H.I. Bell, 'A Byzantine tax-receipt (P. Lond. inv. 2574)', in: *Mélanges Maspero. II: Orient Grec, Romain et Byzantin* (Cairo: Imprimerie de l'Institut Français d'archéologie orientale, 1934-1937) 106-107: 'This [sc. the presence of *κεφαλή* in the text] is in itself sufficient to refute Seeck's hypothesis [...] that the *capitatio humana* was never introduced into Egypt.'; Jones, 'Capitatio and iugatio', 290 (*op. cit.* n. 45): 'The fact that in S.B. 7756 one man is responsible for  $1 \frac{1}{6}$  *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  $1 \frac{1}{6}$  to make up the theoretical total.'

have no meaning for a tax based on persons rather than on land.<sup>200</sup>

However, on whatever basis taxes were assessed in later Roman Egypt (on the general land tax-unit *iuga*, the traditional unit of land *aroura* or the abstract measure of landed wealth *κεφαλή*), they all share an important common denominator: the fact that taxes were assessed on land. Agriculture was by far the most important sector of the Egyptian economy and it should therefore be no surprise that most taxes fell on the land. The part of the urban population that was not in the possession of any land (since there were undoubtedly *Ackerbürger* living in the Egyptian metropoleis) was in general very lightly taxed: the only regular tax levied upon the urban population appears to have been the trade-tax, the *χρυσάργυρον*.

The later Roman system of taxation was not introduced overnight in Egypt. It seems to have been a gradual process, starting under Diocletian and slightly adapted by Constantine.<sup>201</sup> The various stages wherein the new system was introduced is relatively well-documented for Egypt.<sup>202</sup> In 287, a quinquennial cycle of *epigraphai* was introduced in Egypt: a 5-year cycle of indictions, which made the requisitions in kind a regular annual event again.<sup>203</sup> In the

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<sup>200</sup> Bagnall, 'P. Oxy. XVI 1905, SB V 7756 and fourth-century taxation', 190 (*op. cit.* n. 162).

<sup>201</sup> Duncan-Jones claimed that the introduction of the *iugum* was not an invention of Diocletian, but already existed during the Republic in Spain and was used in Phrygia in the Principate: Duncan-Jones, *Structure and scale in the Roman economy*, 200-201 (*op. cit.* n. 52).

<sup>202</sup> Carrié, 'Diocletien et la fiscalité', 50 (*op. cit.* n. 160).

<sup>203</sup> J. Lallemand, *L'administration civile de l'Égypte de l'avènement de Dioclétien à la création du diocèse (284-382): contribution à l'étude des rapports*



same year, the *systates*, civic officials with record-keeping responsibilities became responsible for the collection of the urban head-tax which is known from Oxyrhynchite documents.<sup>204</sup> The next stage seems to have been carried out in 297, when the prefect of Egypt issued an edict called after himself: the Edict of Aristius Optatus. The edict has been considered as a correction on earlier reforms, so that the burden was more equitable distributed between the taxpayers<sup>205</sup>: ‘Our most provident Emperors [...] having learned that the levies of the public taxes were being made capriciously so that some persons were let off lightly while others were overburdened, decided in the interest of their provincials to root out this most evil and ruinous practice and to issue a salutary rule to which the taxes would have to conform.’<sup>206</sup>

The consequences of the edict were not long in coming. New land-registers were compiled between 298 and 303, through which the land was cadastrally measured for the first time in almost half a century.<sup>207</sup> Egypt was meticulously mapped again in the reign of Diocletian.<sup>208</sup> A new census was taken in 309 and 310: every head of a household had to

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*entre l'Égypte et l'Empire à la fin du IIIe et au IVe siècle* (Brussels: Palais des Académies, 1964) 170-172.

<sup>204</sup> Carrié, ‘Diocletien et la fiscalité’, 36 (*op. cit.* n. 160); Bagnall, *Egypt in Late Antiquity*, 154 (*op. cit.* n. 62).

<sup>205</sup> A. Piganiol, ‘La capitation de Dioclétien’, *Revue historique* 176 (1935) 3-4.

<sup>206</sup> *P. Cair. Isid. I* (translated A.E.R. Boak and H.C. Youtie). Cf. John Lydus, *De Magistratibus reipublicae Romanae*, I.4.8.

<sup>207</sup> M. Hombert and C. Preaux, *Recherches sur le recensement dans l'Égypte Romaine* (*P. Bruxelles inv. E 7616*) (Leiden: Brill, 1952) 52-53 (= *P. Lugd. Bat. V*).

<sup>208</sup> Cf. John Lydus, *De Magistratibus reipublicae Romanae*, I.4.8.

declare all male members (himself first), whether they were liable to pay taxes or not (*ὑποτελής/ἀτελής*)<sup>209</sup>, the name of their parents, their age and their address.<sup>210</sup> After all these administrative reorganizations the well-known system of yearly indictions numbered from one to fifteen was introduced in Egypt in 313/314, starting retroactively in the first indiction of 312/313.<sup>211</sup>

Despite the fact that the workings of the later Roman system of taxation are far from clear and are disputed on many points - historians with a specialization on the economy of the later Roman Empire are still waiting for a monograph on this subject, but not a single brave scholar has presented oneself yet for this multi-annual task - it is possible to say a few things on the system in general and on Egypt in particular. Diocletian tried to create order out of the chaos left behind by the crisis of the third century by reforming the Roman Empire administratively, militarily and fiscally. His fiscal reforms are known in the modern literature by the name of *iugatio-capitatio*. This term was derived from the most important units of assessment: the land tax-unit

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<sup>209</sup> Although this terminology smacks of a tax with capitation purposes, Carrié has explained that an *ἀνηρ/κεφαλή ὑποτελής* 'est une unite abstraite d'imposition, qui permet d'exprimer une répartition de quotités entre les divers groupements humains.' Carrié, 'L'Egypte au IVe siècle: fiscalité, économie, société', 440 (*op. cit.* n. 191). Cf. idem, 'Diocletien et la fiscalité', 52 (*op. cit.* n. 160). This view is to a large degree compatible with Bagnall's view on *κεφαλή*: *supra*, p. 50.

<sup>210</sup> The thoroughness in which this census was carried out has been described by Lactantius, *De Mortibus Persecutorum*, XXIII.

<sup>211</sup> R.S. Bagnall and K.A. Worp, *Chronological Systems of Byzantine Egypt* (Leiden: Brill, 2004<sup>2</sup>, originally published: Zutphen: Terra Publishing, 1978) 7-11.

(*iugum*) and the personal tax-unit (*caput*), fictitious parameters for the calculation of the varying tax potential of land, people and animals. The total assessment of an estate was formed by adding the *iuga* and *capita* together, producing a total of *iuga vel/seu/et capita* or ζυγοκεφαλή. However, *iugatio* and *capitatio* were not the successors of the *tributum soli* and *tributum capitis* levied during the Principate, for the *iugum* was not the tax *an sich* but an instrument to calculate the fiscal burden ('...if  $x$  pounds of pork were required in Palestine, and Palestine was rated at  $y$  *iuga*, it was clear that a levy of  $x/y$  pounds of pork per *iugum* would meet the case.'<sup>212</sup>) and the *caput* did not represent an individual as was the case with the poll-tax levied during the Principate. The new system made it possible to calculate the tax burden in a comparatively uniform way because differences in the quality of land were taken into account - as has been illustrated by the passage from the Syro-Roman Lawbook, where 60 *iugera* of the worst quality of land and 20 *iugera* of first-quality land were both counted as one *iugum*.

In Egypt, however, taxes were only levied on land tax-units (*iuga*). The only regular tax levied upon a different base was the trade-tax. Since most taxes were assessed on land, it has often been suggested that the taxes primarily would have been levied in kind. However, the papyri included in the archive of Papnuthis and Dorotheus will show that this is not the complete truth: the agricultural Egyptian countryside was clearly taxed in money *and* in kind, but before I will show this in my account on the archive of the two brothers, it is

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<sup>212</sup> Jones, 'Capitatio and iugatio', 292 (*op. cit.* n. 45).

necessary to conclude this chapter with a short paragraph on the imperial expenditure of the collected tax-revenue.

## 2.4 *The expenditure of tax-revenue*

It shall be no surprise that the Roman government spent most of its tax-revenue on the maintenance of the army. The size of the army was considerably enlarged by Diocletian and although the exact size of the military forces is unknown, it has been estimated that the army consisted of about 400,000 to 600,000 men in the later Roman Empire.<sup>213</sup> All these men had to be maintained by the government, which was the reason for the famous complaint of Lactantius that the number of recipients began to exceed that of the taxpayers (*supra*, p. 64-65): it was undoubtedly a heavy burden to feed, cloth and arm such an enormous army, which had to be paid for by the population of the empire. The soldiers of the Roman army were mainly paid in kind, but they also received an annual *stipendium* - paid in three instalments as under the Principate - of which the height varied according to military rank and *donativa* given on imperial holidays.<sup>214</sup> The *res annonaria* distributed to the military in kind are discussed *in extenso* below (*infra*, p. 113-116).

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<sup>213</sup> Cf. e.g.: Carrié and Rousselle, *L'Empire romain en mutation*, 636-637 (*op. cit.* n. 13); Jones, *The later Roman Empire*, 284-602, 679-686 (*op. cit.* n. 7).

<sup>214</sup> Jones, *The later Roman Empire*, 284-602, 623-626 (*op. cit.* n. 7); Carrié has estimated that the annual expense on military *stipendia* and *donativa* amounted up to one billion *denarii*: J.-M. Carrié, 'Les finances militaires et le fait monétaire dans l'Empire romain tardif', in: G. Vallet (ed.), *Les dévaluations à Rome: époque républicaine et impériale I* (Rome: École française de Rome, 1978) 245.

Besides the army, the government was also responsible for the distribution of grain in the major cities of the empire. A substantial part of the grain (actually from the reign of Aurelian onwards bread was distributed instead of grain) was distributed for free. Most scholars have focussed on the distributions in Rome and Constantinople and it has been estimated that in both cities free bread was distributed to about 70,000 to 80,000 people.<sup>215</sup> But other very large cities, like Alexandria, Carthage and Antioch, were also assisted by the imperial government with regular subsidies of grain.<sup>216</sup> According to Liebeschuetz ‘a large proportion [of the taxation collected in kind] contributed to the ‘*embolē*’, the levy of Egyptian corn destined to feed the inhabitants of Constantinople’<sup>217</sup>, and although it is very likely that a part of the grain produced in Egypt was transported to the new capital to be distributed to the *plebs frumentaria* of the city, it would probably only have been a fraction of the total: most of the grain went to the army and the administration.

Officials in the service of the provincial and imperial administration were also paid wholly or mainly in kind in the

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<sup>215</sup> See in particular: A.J.B. Sirks, ‘The size of the grain distributions in Imperial Rome and Constantinople’, *Athenaeum: studi periodici di letteratura e storia dell’antichità* 79 (1991) 215-237. Also see: J.-M. Carrié, ‘Les distributions alimentaires dans les cités de l’empire romain tardif’, *Mélanges de l’École Française à Rome Antiquité* 87 (1972) 1068-1069.

<sup>216</sup> Jones, *The later Roman Empire*, 284-602, 735 (op. cit. n. 7). There was also a corn dole in Oxyrhynchus in the reigns of Claudius II Gothicus and Aurelian: J.R. Rea, *The Oxyrhynchus papyri* XL (London: Egypt Exploration Society, 1972); J.A. Boek, ‘Broodnodige weldoenerij: graanuitdelingen in vroeg-keizerlijk Rome’, in: J.A. Boek and Y. Klaassen (edd.), *Rome als wereldstad* [working title] 21-24 (forthcoming).

<sup>217</sup> Liebeschuetz, *The decline and fall of the Roman city*, 179 (op. cit. n. 15).

fourth century.<sup>218</sup> Besides the *annona* (the standard ration also distributed to the soldiers) and fodder for the animals, the salary of officials consisted of *cellaria*, ‘food of superior sort for his own table’, as well as clothes, animals and ‘a little cash’.<sup>219</sup> Of course, tax-revenue was not only spent on officials working in the imperial or provincial administration: a substantial part of the tax-revenue also flowed into the personal treasure-chest of the emperor and his relatives.<sup>220</sup>

Last but not least, I would like to mention at this place the tributes paid by the Roman government to the barbarian countries at the northern and eastern frontiers of the empire. These enormous payments were normally paid out in gold at the imperial court where representatives of the barbarian countries had come to collect them. The purposes of these tributes varied from the purchase of a military alliance with some barbarian leader and the protection of the state from barbarian invasions to the support of pro-Roman pretenders to barbarian thrones and the buying off of prisoners of war.<sup>221</sup> Although none of these last categories are insignificant, one has to keep in mind that a majority of the collected tax-revenue would have been spent on the provisioning and maintenance of the Roman army.

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<sup>218</sup> See: Mickwitz, *Geld und wirtschaft*, 165-189 (*op. cit.* n. 1).

<sup>219</sup> Jones, *The later Roman Empire*, 284-602, 396-397 (*op. cit.* n. 7).

<sup>220</sup> R. Delmaire, *Largesses sacrées et res privata: l'aerarium impérial et son administration du IV<sup>e</sup> au VI<sup>e</sup> siècle* (Rome: École française de Rome, 1989) 595-701.

<sup>221</sup> Extensively discussed by: J. Iluk, ‘The export of gold from the Roman empire to barbarian countries from the 4<sup>th</sup> to the 6<sup>th</sup> centuries’, *Münstersche Beiträge zur antiken Handelsgeschichte* 4.1 (1985) 79-102.

After this concise discussion on the general workings of the Roman system of taxation during the Principate and in the later Roman Empire, its organization and the bases of assessment, it is time to move from the ‘macro level’ to the ‘micro level’. In this chapter I have attempted to illustrate the economy of the later Roman Empire by focussing on one of its most important elements: fiscality. Is it possible to say something on the character of the later Roman economy on the basis of this chapter? In the first paragraph of this chapter it has been shown that the tax-revenue in Egypt during the Principate was collected in kind as well as in money in almost even proportions (respectively ca. 54% and ca. 46%; taking into account the margin of error these differences can be neglected). A large majority of the taxes was assessed on the land, while a poll-tax and various trade-taxes provided for the rest of the tax revenue. This latter category was exclusively collected in money, but the levies on the land were partly paid in kind (on grain land) and partly in money (on vine and olive yards). All taxes on the land were paid on a *per iugerum* basis.

The system of taxation was reformed during the reign of Diocletian, restoring the chaos left behind by the economic crisis of the third century. A new procedure to calculate the burden of taxation was introduced, which has become known in the modern literature by the name of *capitatio-iugatio*. The *iugum* and the *caput* were fictive units of assessment, which could be combined to form the total assessment of an estate: land was surveyed and reduced to *iuga*, while the inhabitants and the livestock were reduced to *capita*. Since the currency had collapsed by the third century crisis, the fourth century has often been described as a ‘natural century’: a period in

which transactions in kind predominated. This implies that the fiscal obligations also had to be fulfilled in kind (see, for example, the often-quoted law on the *vestis militaris*). Since it is well beyond my present reach to discuss the complete spectrum of taxation in the later Roman Empire, I have chosen for a different methodological approach. The archive of Papnuthis and Dorotheus provides an interesting spy hole to the fourth-century fiscal landscape of Egypt and it is my hope that by means of these texts the unclear diaphragm of Roman taxation will be adjusted in such a way that we are better able to say something on the character of the later Roman system of taxation and by means of that on the late antique economy in general.



### III

## The archive of Papnuthis and Dorotheus

As the previous chapter was a case-study to examine the discussion set out in the first chapter, this part of my thesis will serve as a case-study to illustrate and clarify the conclusions of the previous chapter. The historiographical framework has already been furnished with a ‘macro level’-exterior of fiscal developments in the Roman Empire, but to complete the construction it also needs an interior, which will be provided in this chapter. The later Roman system of taxation will here be illustrated by the fourth-century Oxyrhynchite ‘micro level’ represented by the archive of the brothers Papnuthis and Dorotheus.

From 1895 onwards, two scholars of The Queen’s College, Oxford University, started excavating the ancient ruins of the Egyptian desert on behalf of the Egypt Exploration Fund. Bernard P. Grenfell (1869-1926) and Arthur S. Hunt (1871-1934) spent dozens of excavating seasons in Egypt in the service of the EEF (in World War I renamed as Egypt Exploration Society; or: EES) ‘aimed specifically at the recovery of papyri’.<sup>222</sup> The zenith of their excavating efforts

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<sup>222</sup> Lewis, *Life in Egypt under Roman rule*, 3 (*op. cit.* n. 76); L. Lehnus, ‘Bernard Pyne Grenfell (1869-1926) e Arthur Surridge Hunt (1871-1934)’, in: M. Capasso (ed.), *Hermae. Scholars and Scholarship in Papyrology* (Pisa: Giardini, 2007) 115-141.

undoubtedly was the site of modern Al-Bahnasā, the ancient capital of the Oxyrhynchite nome<sup>223</sup>, located about 160 kilometres south-west of Cairo on the Bahr Yussef (the canal of Joseph), a branch of ‘the Egyptian source of life’ that connected the river Nile with ancient Lake Moeris (the present lake, Birket Qarun, is much smaller than its ancient precedent).<sup>224</sup>

During their fifth season of excavation at Al-Bahnasā, in 1905/1906, they discovered the papyri belonging to the archive of Papnuthis and Dorotheus. The bulk of these texts were published in the 48<sup>th</sup> volume of *The Oxyrhynchus papyri*-series in 1981, three-quarters of a century after their discovery (as *P. Oxy.* XLVIII 3384-3429: the archive of Papnuthis and Dorotheus).<sup>225</sup> However, some texts that

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<sup>223</sup> In Antiquity the name ‘Oxyrhynchus’ has probably not been used. Metropoleis like Arsinoe and Oxyrhynchus were officially styled as ‘the city of the Arsinoites’ and ‘the city of the Oxyrhynchites’. However, I will adopt the modern notation out of convenience. See: Lewis, *Life in Egypt under Roman rule*, ix (op. cit. n. 76); J.F. Oates, ‘Ptolemais Euergetis and the City of the Arsinoites’, *The Bulletin of the American Society of Papyrologists* 12.3 (1975) 113-120; D. Hagedorn, ‘Ὀξυρύγχων πόλις und ἡ Ὀξυρυγγιτῶν πόλις’, *Zeitschrift für Papyrologie und Epigraphik* 12 (1973) 277-292; A. Calderini (ed. by S. Daris), *Dizionario dei nomi geografici e topografici dell’Egitto greco-romano, Supplemento III: 1994-2001* (Milan: Cisalpino-Goliardica, 2003) 86-115; E.-M. Grocholl, ‘Bermerkungen zur Datierung von Bezeichnungen und Epitheta der Stadt Oxyrhynchos’, *Zeitschrift für Papyrologie und Epigraphik* 85 (1991) 268-270.

<sup>224</sup> For a short introduction on the lay-out of the Oxyrhynchite nome see: J. Rowlandson, *Landowners and tenants in Roman Egypt: the social relations of agriculture in the Oxyrhynchite nome* (Oxford: Clarendon Press, 1996) 8-26; I.F. Fikhman, *Oksirinkh - gorod papirusov. Social’no-ekonomicheskije otnošeniya v Egipetskom gorode iv- serediny vii v* (Moskow: Izdatel'stvo 'Nauka' Glavnaya Redaktsiya Vostochnoi Literatury, 1976).

<sup>225</sup> M. Chambers, W.E.H. Cockle, J.C. Shelton and E.G. Turner (edd.), *The Oxyrhynchus papyri. Volume XLVIII* (London: The British Academy by the

possibly or probably belong to the same archive were published elsewhere, like *P. Osl.* III 88, *P. Osl.* III 162, *P. Oxy.* IX 1223, *P. Oxy.* XLIX 3480, *P. Oxy.* LVI 3875, *SB V* 7756 en *SB XXII* 15359 (= *P. Oxy.* I 182). Even if these texts are not part of our archive, they are closely related to it - judged by their contents.

In this chapter the above-mentioned archive of Papnuthis and Dorotheus will be elaborately discussed for the first time, with a special emphasis on the way in which taxes were levied and on what bases taxes were levied in later Roman Oxyrhynchus. But before we can start our extensive discussion on the fiscal/economic contents of the texts, I will introduce the reader to the most important characters of the archive.

### 3.1 *Dramatis personae: introducing the family*

Obviously, the two brothers appear most frequent in their archive, both of them about twenty-five times. Despite the fact that they appear frequently in the texts, we are not elaborately informed about their private lives: most letters are merely about business matters. Still, it is possible to deduce some private facts from the correspondence.

Unfortunately, a substantial part of the papyri belonging to the archive is undated, and therefore we cannot say with absolute certainty whether Papnuthis or Dorotheus was the

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Egypt Exploration Society, 1981) 74-145. The archive of Papnuthis and Dorotheus is primarily edited by J.C. Shelton (1943-1992). Papyri and ostraka are cited according to the conventions of J.F. Oates *et alii*, *Checklist of editions of Greek, Latin, Demotic and Coptic papyri, ostraca and tablets* (Oakville: American Society of Papyrologists, 2001<sup>5</sup>).

elder brother. It is generally assumed that Papnuthis was the elder one, since his first appearance on a dated papyrus was in November or December 342 (it is even stated that he had a hand of professional quality the next after).<sup>226</sup> It is probable that he was already a (young) adult at that time, and therefore he should have been born around 320. The earliest datable papyrus in which Dorotheus appears is *P. Oxy.* 3392: 'Year 36 = 5, Payni 20' (line 8) or 14 June 360.<sup>227</sup> Because of the time span of almost eighteen years between the first appearance of the two brothers, the *communis opinio* is that Papnuthis was the elder brother, although the exact difference in age could have been much smaller (or - less likely - even: bigger). Another fact we know about the life of Papnuthis is that he was married to one Apias, who is greeted by her husband in a letter (*P. Oxy.* 3396, l. 21), but whose role is very insignificant in the rest of the archive.<sup>228</sup>

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<sup>226</sup> *P. Oxy.* 3388, l. 4: 'Year 37, 19, 10, Choiak...' (corresponding to the regnal years of Constantine I, Constantius and Constans; it is noteworthy that Constantine I was already dead for more than five years at the time of writing). The text must be dated between 27 November 342 and 26 December 342. Cf. Bagnall and Worp, *Chronological Systems of Byzantine Egypt*, 55-62 (*op. cit.* n. 211). Papnuthis' professional handwriting can be found in *P. Oxy.* 3389, in which he acted as a scribe on behalf of one Aurelia Apia. It is said by the editor that 'both the brothers wrote fluently, though with a striking disregard for rules of spelling and grammar': J.C. Shelton, *The Oxyrhynchus papyri. Volume XLVIII*, 74 (general introduction to the archive).

<sup>227</sup> The regnal years are corresponding to the reigns of Constantius and Julian.

<sup>228</sup> Without being mentioned by name, Papnuthis' wife appears in a letter from Maria to Papnuthis too, *P. Oxy.* 3403, l. 6-9: 'Your wife too says herself that you should send her money for the wages of the wool-workers.'

Although we are not elaborately informed about family circumstances in the texts, we know the parents of Papnuthis and Dorotheus. They were Aurelius Aphynchis and Aurelia Maria, and they thus belonged to the class of the Aurelii - as did their sons. The (male) members of the family have used their *nomen gentile* only to sign a few official documents (*P. Oxy.* 3389, 3393, 3394, 3395), 'internal correspondence' to colleagues or acquaintances was usually only signed with their respective *cognomen*. Since the family belonged to the class of the Aurelii, the odds are very high that the ancestors of Aphynchis and Maria had adopted that name after Caracalla's *Constitutio Antoniniana* came into force in AD 212. Aphynchis and Maria were residents of the nome capital, where the father of Papnuthis and Dorotheus seems to have possessed some real estate. In the earliest datable text of the archive (*P. Oxy.* 3389) he leases out a house in the Myrobalanus Quarter in Oxyrhynchus. It is noteworthy that he leased out the property to one Aurelia Maria. Unfortunately, it is not known whether she was the mother of Papnuthis and Dorotheus, or an Aurelia Maria with - coincidentally - the same name (which was a rather common one at that time). But, if this Aurelia Maria and the mother of our two main characters are identical, it is well possible that Aphynchis and Maria were already married when the contract was signed: the papyrus is dated on 'Pharmuthi 19' 'of the current year 25, 15, 7', or converted to our calendar: 14 April 331.<sup>229</sup> We have seen above that 'the elder brother' Papnuthis should have been born in about the year 320, that

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<sup>229</sup> *P. Oxy.* 3384, l. 2, 14. The regnal years are corresponding to the reigns of Constantine I, Constantine II and Constantius.

is why - if the Aurelia Maria of *P. Oxy.* 3384 is the mother of Papnuthis and Dorotheus - Aphynchis and Maria might have been married long before they made up the contract.<sup>230</sup> The latest papyrus in which Aphynchis is known to be alive is *P. Oxy.* 3389, dated on 14 March 343. It would, however, be unwise to draw any conclusions about the possible death of the father of the two brothers on this fact. (However, when we assume that his first-born - Papnuthis? - was born in 320, and that Aphynchis was married on a 'normal' Roman age, i.e. between the twenty-fifth and thirtieth year of his life<sup>231</sup>, he was already at an - in ancient terms - respectable age in 343.)

The text on the lease of the house in the Myrobalanus Quarter is also informative about the names of one (and possibly three) grandparent(s). Aurelius Aphynchis was the son of Horus; Aurelia Maria was the daughter of Pathermutius and Attia.<sup>232</sup> To complete the family tree: another brother and four sisters of Papnuthis and Dorotheus are summed up in a letter written by Papnuthis to his parents during his only known business trip set out, when he resided in Alexandria, where he was sent to by his landlord at

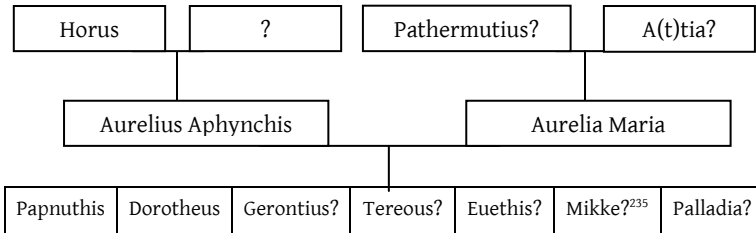
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<sup>230</sup> Cf. J. Beaucamp, *Le statut de la femme à Byzance (4e-7e siècle) 2: Les pratiques sociales* (Paris: De Boccard, 1992) 105-127.

<sup>231</sup> Cf. R.P. Saller, 'Men's age at marriage and its consequences in the Roman family', *Classical philology* 82 (1987) 21-34; R.S. Bagnall and B.W. Frier, *The demography of Roman Egypt* (Cambridge: Cambridge University Press, 1994) 116: 'The median male age at first marriage may in fact be slightly later than 25.'

<sup>232</sup> *P. Oxy.* 3384, l. 3-5. Although Attia seems to be a Roman name, we may assume that this was a miswriting for the Hellenistic-Egyptian name Atia, a regularly attested name in papyri dating from the third and fourth centuries.

that time (*P. Oxy.* 3396).<sup>233</sup> We cannot be sure, however, if these brother and sisters were part of the same nuclear family as Papnuthis and Dorotheus, since ‘the letter gives some striking examples of terms of family relationships used simply to express friendship or respect’.<sup>234</sup> For example, Papnuthis lists an additional ‘mother’ (Taësis) and two more fathers (Ammonius/Ammonion and Petemounious) in the text, besides his real parents. When we assume that the brothers and sisters mentioned are all offspring of Aphynchis and Maria we can draw up the next family tree:



### 3.2 *Business matters: the careers of the two brothers*

‘The brothers can be described as belonging to a sort of service gentry. We find them engaging in the managing of

<sup>233</sup> *P. Oxy.* 3396, l. 21-31; besides his brothers and sisters, Papnuthis greets his wife Apias and some acquaintances.

<sup>234</sup> Shelton, *The Oxyrhynchus papyri. Volume XLVIII*, 91 (introduction to *P. Oxy.* 3396).

<sup>235</sup> *P. Oxy.* 3396, l. 24-25: ‘ἀσπάζομαι τὴν κυρίαν μου ἀδελφὴν τὴν Μικκίην.’ (‘I greet my lady sister Mikke.’), interpreted by P.J. Parsons as: ‘ἀσπάζομαι τὴν κυρίαν μου ἀδελφὴν τὴν μικκίην.’ (‘I greet my little lady sister.’) I strongly favour the interpretation of Parsons, due to the presence of the article.

landed property and serving as assistants to the district official, the *praepositus pagi*.<sup>236</sup> Peter Fibiger Bang - the author of the fragment above - forgot to mention that both functions could coincide, and it is therefore sometimes hard to determine in what function the brothers acted in a specific context. But, if one thing has become clear from the archive, it is that Papnuthis and Dorotheus were busy like bees. In all, they have probably worked for eight different employers during a period of perhaps as long as forty years (however, it is possible that some single assignments have survived the ravages of time and made it into the archive, whereas other long-lasting appointments left no traces in the papyri at all).

The earliest datable job of either of the brothers is late in the year 342 (*P. Oxy.* 3388). In this text, Papnuthis is ordered by his landlord Sarapammon to provide a tenant with a certain amount of wheat.<sup>237</sup> Papnuthis is addressed as Sarapammon's *προνοητής* (caretaker, business manager), thus, he was in the service of a landowner acting as an intermediary between the tenants and their lord. It is not impossible that Sarapammon resided in the nome capital, whilst his middleman managed a cluster of estates in the rural hinterland.<sup>238</sup> In contrast to this position as middleman in the private sector, he acted in a (semi-)public function in the next datable papyrus. However, this text has been written sixteen years after the afore-mentioned one.<sup>239</sup>

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<sup>236</sup> F.B. Bang, 'Trade and empire', 35 (*op. cit.* n. 59).

<sup>237</sup> Cf. Rowlandson, *Landowners and tenants in Roman Egypt*, 224 (*op. cit.* n. 224).

<sup>238</sup> Cf. Bagnall, *Egypt in Late Antiquity*, 148-153 (*op. cit.* n. 62).

<sup>239</sup> *P. Oxy.* 3390, l. 7: 'Year 34 = 3, Epeiph 20', or: 14 July 358 (the regnal years correspond with the reigns of Constantius and Julian).



Papnuthis should hand over a sizeable amount of denarii to the strategus' caterer on behalf of a man called Patas and his *κοινωνοὶ νομικοὶ* ('associate notaries').<sup>240</sup> Since the text lacks any further information on the functions of either the employers or employee it is hard to say by whom Papnuthis was employed; it is, however, not inconceivable that he was in the service of the notaries.

Less than two years later, in AD 360, Papnuthis was the assistant (*βουθός*) of Horion, a *praepositus pagi*, the highest official ('district chief') in a subdistrict of a nome. Six months later it is clear that Papnuthis' brother Dorotheus also worked for the same *praepositus*.<sup>241</sup> From this moment onwards, it appears that the two brothers worked together during most - if not all - of their assignments.

Their next employer was a *praepositus pagi* too, called Eulogius, but their relation with Eulogius was far from perfect as is illustrated by various petitions written by the two brothers to high officials, making their complaint about the discourteous way in which they were treated by their lord. The first petition - addressed to Aurelius Sarmates and Aurelius Diogenes, the *riparii* of the Oxyrhynchite nome at that time<sup>242</sup> - is dated on Payni 14 in the consulship of Valentinian and Valens (8 June 365).<sup>243</sup> They claim that they have been maltreated by their lord Eulogius (in this text

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<sup>240</sup> See the scholarly note of: Shelton, *The Oxyrhynchus papyri. Volume XLVIII*, 83; on the possible function of Patas and his associates.

<sup>241</sup> *P. Oxy.* 3391-3392, respectively dated on 16 January 360 and 14 June 360.

<sup>242</sup> S. Torallas Tovar, 'Los *riparii* en los papiros del Egipto tardoantiguo', *Aquila legionis: cuadernos de estudios sobre el Ejército Romano* 1 (2001) 123-151. The *riparii* were the highest police agents of the nome.

<sup>243</sup> *P. Oxy.* 3393.

addressed as *πολιτευόμενος*, ‘curialis’<sup>244</sup>, but he can in all probability be equated with the *praepositus pagi* of P. Oxy. 3400 and 3425 and SB 7756), and the two brothers are fallen into financial difficulties because of this maltreatment (the contents of this text will be discussed in more detail below). The second petition was addressed to Flavius Flavianus<sup>245</sup>, the *praefectus Aegypti* in AD 364-366, and although there is no absolute certainty that this document is related to the last one, there is every appearance that this text is the appeal to the highest Egyptian court following to the petition to the *riparii*. In the petition to the police officials Papnuthis and Dorotheus presented themselves as *βοηθοί* of Eulogius, but in the letter to Flavianus they only requested that he should try to find a solution to their financial difficulties without mentioning their lord or their precise function. We may safely assume that the brothers were not in the mood to work much longer in the service of Eulogius after this affair, and left him soon after for another employer.

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<sup>244</sup> The term has been translated by Shelton as ‘councillor’, however, see: H. Geremek, ‘Les *πολιτευόμενοι* égyptiens sont-ils identiques aux *βουλευταί*?’ (op. cit. n. 142); K.A. Worp, ‘*Ἀρχαντες* and *πολιτευόμενοι* in Papyri from Graeco-Roman Egypt’, *Zeitschrift für Papyrologie und Epigraphik* 115 (1997) 201-220; A. Laniado, ‘*Bouleutai* and *politeuomenoi*’, *Chronique d’Égypte: bulletin périodique de la Fondation Égyptologique Reine Élisabeth* 72 (1997) 130-144; K.A. Worp, ‘*Bouleutai* and *politeuomenoi* in Later Byzantine Egypt again’, *Chronique d’Égypte: bulletin périodique de la Fondation Égyptologique Reine Élisabeth* 74 (1999) 124-132.

<sup>245</sup> P. Oxy. 3394; Lallemand, *L’administration civile de l’Égypte de l’avènement de Dioclétien à la création du diocèse (284-382)*, 246 (op. cit. n. 203). Cf. C. Vandersleyen, *Chronologie des préfets d’Égypte de 284 à 395* (Brussels: Latomus, 1962) 101 n.4, who equated Flavius Flavianus in this context with the *praeses Augustamnicae*.

Unfortunately, we are not capable to reconstruct with any certainty the further career of the two brothers. We know of four other employers, but we cannot put them in any chronological order (it is even possible that Papnuthis and Dorotheus worked for some of them before they commenced their employment with Eulogius in AD 365). However, it is supposed that they worked in the service of another *praepositus pagi*, Diogenes, around the year 376. Papnuthis and Dorotheus are instructed by this lord to pay the arrears from the third and fourth indictions in *P. Oxy.* 3415 (l. 9-12): the implication is that the text is written during the fifth indiction.<sup>246</sup> Possible years for this fifth indiction are AD 346, 361 and 376, of which the first can be excluded since Papnuthis and Dorotheus were not involved in any public matters before AD 358 on dated papyri. The second option can probably also be excluded, but it is not ‘chronologically impossible’, because both brothers were employed by Horion late in the year 360.<sup>247</sup> This leaves AD 376 as most plausible date for *P. Oxy.* 3415. Furthermore, the brothers were involved in business with one Hieracion (*P. Oxy.* 3404), a landlady named Clematia<sup>248</sup> (*P. Oxy.* 3406, 3407) and a paternalistic figure called Chaeremon, of whom it cannot be excluded that he was a *praepositus pagi* too (*P. Oxy.* 3408, 3409, 3410, all written by Chaeremon addressed to Dorotheus; and

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<sup>246</sup> However, cf. Delmaire, *Largesses sacrées et res privata*, 359 n.28 (*op. cit.* n. 220).

<sup>247</sup> Shelton, *The Oxyrhynchus papyri. Volume XLVIII*, 121 (introduction to *P. Oxy.* 3415).

<sup>248</sup> R.S. Bagnall and R. Cribiore, *Women’s letters from ancient Egypt, 300 BC-AD 800* (Ann Arbor [MI]: University of Michigan Press, 2006) 212-214.

possibly *P. Osl. III 88*<sup>249</sup>). It is, however, impossible to give the precise chronological order of their further career.

<i>Year</i>	<i>Employer</i>	<i>Related papyri</i>
ca. 342	Sarapammon (landlord)	<i>P. Oxy.</i> 3387, 3388, 3419, 3420
ca. 358	Patas and associates	<i>P. Oxy.</i> 3390
ca. 360	Horion ( <i>praepositus pagi</i> )	<i>P. Oxy.</i> 3391, 3392, 3405, 3412; 3875
ca. 365	Eulogius ( <i>praepositus pagi</i> )	<i>P. Oxy.</i> 3393, 3394 ?, 3400?, 3414?, 3425; <i>SB</i> 7756
ca. 376?	Diogenes ( <i>praepositus pagi</i> )	<i>P. Oxy.</i> 3398, 3414?, 3415, 3416
?	Hieracion (?)	<i>P. Oxy.</i> 3404
?	Clematia (landlady)	<i>P. Oxy.</i> 3406, 3407?
?	Chaeremon ( <i>praepositus pagi?</i> )	<i>P. Oxy.</i> 3408, 3409, 3410; <i>P. Oslo</i> 88

### 3.3 *Teamwork: city, hinterland and economic speculation*

The brothers resided, probably, most of their time in the nome capital (it is not inconceivable that they possessed some house property in Oxyrhynchus, inherited from their father; cf. *P. Oxy.* 3384<sup>250</sup>), but during some of their

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<sup>249</sup> However, it is to be doubted, whether Chaeremon wrote *P. Oslo* 88. R.S. Bagnall, K.A. Worp and I disagree with J.C. Shelton's reading of line 38, where he read the address as *π(αρά) Χαί[ρήμονος]*. Roger Bagnall reacted - in personal correspondence on 17 November 2007 - as follows: 'I have no idea where Shelton's reading comes from. I do not see Chai- at all. I'd rather imagine a big epsilon if anything.'

<sup>250</sup> However, see: *P. Oxy.* 3393, l. 13: '...on account of our great poverty we possess no property whatever...'. Of course, this is no objective representation. The two brothers present themselves here, in their

assignments they were in particular responsible for (parts of) the surrounding hinterland of the city, and therefore often resided in the Oxyrhynchite countryside too. Since 307/308, the Oxyrhynchite nome was subdivided into ten pagi, each headed by one (or more) official(s) called *praepositus pagi*.<sup>251</sup> This man was ‘a member of the curial class of the city who was responsible for not only supervising the tax collection system but also appointing village officials and, indeed, almost anything else.’<sup>252</sup> The *praepositi pagi* were often administrating their subject areas from the nome capital, leaving the fieldwork to their staff. Our two brothers worked as assistants in the service of (up to) four different chiefs of Oxyrhynchite subdistricts (Horion, Diogenes, Eulogius and - perhaps - Chaeremon). Although we do not know of which *pagi* these men were *praepositus*, we can deduce the geographic area of which Papnuthis and Dorotheus carried responsibility from the villages mentioned in the papyri. These include: Terythis in the fourth *pagus*<sup>253</sup>, Satyru and Tampemu in the fifth *pagus* (together with the adjacent

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petition to the *riparii*, in the most miserable way possible to influence the decision of the police agents.

<sup>251</sup> P. Pruneti, ‘Toparchie e pagi: precisazioni topografiche relative al nòmo Ossirinichite’, *Aegyptus: rivista italiana di egittologia e di papirologia* 69 (1989) 113-118; Lallemand, *L’administration civile de l’Égypte de l’avènement de Dioclétien à la création du diocèse*, 97-107 (*op. cit.* n. 203); cf. the older information in: P. Pruneti, *I centri abitati dell’Ossirinichite: repertorio toponomastico* (Florence: Gonnelli, 1981) 235-237. For the *praepositus pagi*, see: A. Jördens and P. Schubert (edd.), *Griechische Papyri der Cahiers P.1 und P.2 aus der Sammlung des Louvre* (Bonn: Habelt, 2005) 109-126 (= P. Louvre II.120); A.K. Bowman, *The town councils of Roman Egypt*, 123-124 (*op. cit.* n. 133).

<sup>252</sup> Bagnall, *Egypt in Late Antiquity*, 62 (*op. cit.* n. 62).

<sup>253</sup> P. Oxy. 3393.

Cynopolite nome)<sup>254</sup>, Psobthis in the ninth *pagus*<sup>255</sup>, and Berky of which the location is not known<sup>256</sup>.

From the correspondence - especially those between the two brothers - it appears that Papnuthis and Dorotheus really worked as a team. A recurring phenomenon in their written correspondence is the distribution of work between the two brothers. In my opinion, it does not appear logical to write letters to one another, when one is in each other's presence. Therefore, we may assume that Papnuthis and Dorotheus were geographically separated when they corresponded. Probably, one of them (permanently?) resided in the city of Oxyrhynchus to meet officials etc., while the other was levying taxes in the countryside and argued with the comarchs. An undated papyrus written by Papnuthis to his brother can illustrate this situation:

To my lord brother Dorotheus, Papnuthis. I have written to you many times about the expense of the workers and you have sent me nothing; now by God I have great unpleasantness with the collectors every day on account of this. Make haste to send me the expense of the same workers today; you know yourself what financial obligation is. If you know that the comarchs have refused to turn over these [sums], send me the comarchs and I shall make them [sc. the comarchs] pay them [sc. these sums] all in the city. And hasten to send the money to Felix today, for in this you will suffer no disadvantage. Do not leave us in need on this account. And concerning the

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<sup>254</sup> *P. Oxy.* 3408, 3409, 3410, 3423. Cf. P.J. Sijpesteijn and K.A. Worp, *Eine Steuerliste aus Pheretnuis (P. Pher.)* (Amsterdam: Gieben, 1993) 7-10.

<sup>255</sup> *P. Oxy.* 3408.

<sup>256</sup> *P. Oxy.* 3400.

expenses which I advanced on behalf of the comarchs, make haste to raise them from the collection and send them, or send the comarchs to the city - you know yourself the bad things in the city - and the expense. And I am locked in because of the gold for the land tax and up to today you have sent me nothing. (2<sup>nd</sup> hand?) I pray for your health for many years.<sup>257</sup>

In this text Papnuthis is residing in ‘the administrative headquarters’ of the brothers in Oxyrhynchus, while Dorotheus was levying a tax in an unspecified location. Dorotheus resided in there, because a levy (by the government) to hire workmen for an unspecified task had fallen to the village. Apparently things did not go according to schedule in the countryside: the comarchs refused to cooperate with Dorotheus and they did not hand over the requested amount of money to him. Meanwhile, Papnuthis was troubled by the *ἀπαιηταί*.<sup>258</sup> (These men were responsible for the collection of items other than wheat and worked in the service of the central government. They belonged to the group of *susceptores* and collected the taxes from the staff of the *praepositi pagi*.) The *ἀπαιηταί* wanted to receive the requested sum as soon as possible. Papnuthis complains to his brother, because he had asked him for the money already several times in preceding letters, and he advises Dorotheus to send the comarchs to the city if they refused to cooperate again. (The underlying argument here is that the environment of the nome capital was more

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<sup>257</sup> P. Oxy. 3397 (translated by J.C. Shelton).

<sup>258</sup> B. Palme, *Das Amt des ἀπαιητής in Ägypten* (Vienna: Verlag Brüder Hollinek, 1989) 78-89.

persuading to pay taxes because of the nearby presence of the city prison. Because of this threat, we know that the brothers were in the service of a *praepositus pagi* at the time of writing.<sup>259</sup>)

However, in the last part of the text (l. 16-21) the reader gets the impression that Papnuthis himself had already raised an amount of money in advance to pay the *ἀπαιτηταί* (l. 6: ‘the collectors’) on behalf of the comarchs. Here, we touch upon one of the most remarkable practices emerging from the archive: the fact that the two brothers willingly paid out of their own funds and in advance taxes, which had to be regained at a later stage during the collections in the countryside.<sup>260</sup> This also explains why Papnuthis emphasizes the fact that Dorotheus should think about their financial obligation: possibly the brothers borrowed a sum to pay the taxes in advance. However, if the comarchs refused to cooperate in regaining the money, Papnuthis and Dorotheus could end in financial difficulties, having borrowed a certain amount without being able to pay back the loan.

A similar situation was also the cause for the above-mentioned affair with Eulogius in AD 365 (see, *supra* 98).<sup>261</sup> Before the brothers started collecting the taxes due from the village of Terythis, Eulogius had promised that he would provide the money to them in advance, so that it could be recovered from the villagers afterwards. However, he failed

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<sup>259</sup> Cf. *P. Oxy.* 3409, 3430.

<sup>260</sup> Also see: *P. Oxy.* 3419; cf. for the second century *P. Oxy.* 2861.

<sup>261</sup> Cf. C. Drecoll, *Die Liturgien im römischen Kaiserreich des 3. und 4. Jh. n. Chr.: Untersuchung über Zugang, Inhalt und wirtschaftliche Bedeutung der öffentlichen Zwangsdienste in Ägypten und anderen Provinzen* (Stuttgart: Franz Steiner Verlag, 1997) 147-149.



to keep his promises and referred the *ἀπαιτηταί* immediately to Papnuthis and Dorotheus: ‘Since, then, on account of our great poverty we possess no property whatever, we borrowed from moneylenders a certain quantity of silver coins and solidi, which have indeed been paid to cover the same public dues.’<sup>262</sup> The brothers, thus, had to borrow the required amount of money from a number of private lenders and paid the *ἀπαιτηταί* with this money, expecting to regain their debts afterwards during the collection. However, their lord Eulogius forbade Papnuthis and Dorotheus to travel to Terythis<sup>263</sup> to recover their debts and, instead, sent his own son Sarapion (who is possibly also the son working in the service of his father mentioned in *SB* 7756, l. 23) with another *βοηθός* to the village to collect the taxes. The brothers were therefore unable to pay back their private lenders and petitioned the *riparii* ‘requesting that the responsible officials be summoned and required to return all that was advanced by us so that we can repay the men who made loans to us...’<sup>264</sup>

But why would Papnuthis and Dorotheus pay certain taxes in advance? In the above-mentioned case they were forced into the situation by their unwilling superior, as a result of which the two brothers had to borrow the amount due. They borrowed, however, a *ῥητὴν ποσότητα ἀργυρίων καὶ νομισματίων* (*P. Oxy.* 3393, l. 14-15): a certain quantity of

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<sup>262</sup> *P. Oxy.* 3393, l. 13-15.

<sup>263</sup> Eulogius had forbidden the brothers to travel ‘from the month of Tybi of to the present’ (*P. Oxy.* 3393, l. 17), while the petition was dated on Payni 14: five months later.

<sup>264</sup> *P. Oxy.* 3393, l. 22-24.

silver coins and solidi.<sup>265</sup> But how likely was it that they could recover their loan of silver and gold coins from peasants or tenants? Did peasants own gold or silver to pay their taxes? To be honest, it strikes me as highly unlikely.<sup>266</sup> A solution to this problem is offered by the editor of the archive in his general introduction: ‘the peasant might pay small change which would then be used by the collector to purchase the solidi that had to be turned over to the government.’<sup>267</sup> This would mean that Papnuthis and Dorotheus had to convert the received payments into the currency desired by the government. Highly interesting in this respect is an undated letter<sup>268</sup> by Dorotheus to his brother (again, it appears that

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<sup>265</sup> R.S. Bagnall, *Currency and inflation in fourth century Egypt* (*Bulletin of the American Society of Papyrologists Supplements* 5; Chico: Scholars Press, 1985) 16.

<sup>266</sup> Bagnall, *Egypt in Late Antiquity*, 158 (*op. cit.* n. 62); L. de Ligt, ‘Demand, supply, distribution: the Roman peasantry between town and countryside: rural monetization and peasant demand’, *Münstersche Beiträge zur antiken Handelsgeschichte* 9.2 (1990) 24-56; and - to a lesser degree - the companion article: idem, ‘The Roman peasantry demand, supply, distribution between town and countryside. II. Supply, distribution and a comparative perspective’, *Münstersche Beiträge zur antiken Handelsgeschichte* 10.1 (1991) 33-77. Cf. P. Halstead and J. O’Shea, ‘Introduction: Cultural responses to risk and uncertainty’, in: idem (edd.), *Bad year economics. Cultural responses to risk and uncertainty* (Cambridge: Cambridge University Press, 1989) 4; Garnsey, *Famine and food supply in the Graeco-Roman world*, 43-68 (*op. cit.* n. 20). In the papyri we often find fractions (up to  $\frac{1}{1536}$ ) of a solidus to be paid as tax, see: J. Gascou and K.A. Worp, ‘P. Laur. IV 172 et les taxes militaires au 4e siècle’, *Zeitschrift für Papyrologie und Epigraphik* 56 (1984) 122-126.

<sup>267</sup> Shelton, *The Oxyrhynchus papyri. Volume XLVIII*, 75 (general introduction to the archive).

<sup>268</sup> On the basis of comparative prices of gold Roger Bagnall has dated this text in the mid 350s: Bagnall, *Currency and inflation in fourth century Egypt*, 44, 61-62 (*op. cit.* n. 265). Also see: idem, *The Kellis agricultural account book* (*P. Kell. IV Gr. 96*) (Oxford: Oxbow Books, 1997) 225-229;

one was residing in the city, while the other brother was in the countryside):

To my lord brother Papnuthis, greeting from Dorotheus. You did well to write to me about the solidi, for I inquired and found the quantity with the Alexandrian at 1,350 [+?] myriads of denarii. Make haste therefore to send me the money tomorrow, seeing that there has been rumour about the gold of the recruits (*aurum tironicum*) and everyone is looking for solidi and the price is going up every day. But send me the money quickly so that we can buy...<sup>269</sup>

The *aurum tironicum* (Greek: χρυσός των τIRONΩΝ; a recruiting tax on landownership levied on an irregular base<sup>270</sup>) was obviously levied in gold, 'but the tax obligation of many individual households fell far below the value of a gold coin.'<sup>271</sup> In this text, we witness the mechanism of conversion in which the brothers needed to exchange the payments in base metal coinage (collected from the peasants liable to the tax) into a higher, more solid denomination - gold (*solidi*) in this case.<sup>272</sup> A considerable degree of speculation was

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idem, 'Fourth-century prices: new evidence and further thoughts', *Zeitschrift für Papyrologie und Epigraphik* 76 (1989) 69-70. These publications have outdated the older: R.S. Bagnall and P.J. Sijpesteijn, 'Currency in the fourth century and the date of CPR V 26', *Zeitschrift für Papyrologie und Epigraphik* 26 (1977) 111-124.

<sup>269</sup> P. Oxy. 3401 (translated by J.C. Shelton).

<sup>270</sup> *Infra*, p. 89.

<sup>271</sup> Bang, 'Trade and empire', 35 (*op. cit.* n. 59).

<sup>272</sup> A short introduction to the monetary situation of the later Roman Empire can be found in: Harl, *Coinage in the Roman Economy, 300 B.C. to*

involved with all this, as is clear from the letter. The exchange rate between *solidi* and (myriads) of *denarii* was quite susceptible to fluctuation, especially when a rumour created a special demand for *solidi* (after all, a rising demand with an unaltered supply usually causes higher prices): the thing was to purchase *solidi* for the lowest amount of myriads of *denarii* possible, so that Papnuthis and Dorotheus (or, perhaps, their landlord) could make a profit. Papnuthis was probably informed by an unknown person, some mysterious ‘Alexandrian’<sup>273</sup> offered *solidi* at a rather favourable rate of exchange, and instructed his brother to take a closer look. It is likely that this Alexandrian was a money-changer.<sup>274</sup> The information appeared to be correct and Dorotheus wrote immediately back to his brother to send him the necessary base metal coinage, to buy enough *solidi* for the upcoming levies. However, the price of gold was already going up every day, so the brothers had to hurry up to benefit from this possible financial windfall.

In short, although the brothers were often geographically separated - one meeting (or getting troubled by) officials in Oxyrhynchus, while the other collected taxes in the rural hinterland, arguing with the comarchs - they were in constant contact with one another, corresponding about their activities, giving instructions to each other, etc. It

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A.D. 700, 125-180 (*op. cit.* n. 122). On terminology: Bagnall, *Currency and inflation in fourth century Egypt*, 9-18 (*op. cit.* n. 265).

<sup>273</sup> It is possible to read instead of ‘παρά [τω] Ἀλεξανδρεὺς’ (5-6; l. Ἀλεξανδρεῖ) a short name, instead of the article.

<sup>274</sup> The office of money-changer in Graeco-Roman Egypt is elaborately discussed in: R. Bogaert, ‘Les κολλυβιστικά τράπεζαι dans l’Égypte gréco-romaine’, *Anagennesis: a papyrological journal* 3 (1983) 21-64.

seems that their headquarters were located in the city of Oxyrhynchus, where they collected all the levied taxes (cf. *P. Oxy.* 3399 and 3402) and handed over the requested sums to the *ἀπαιτηταί* or other tax-officials. However, in some instances these collectors apparently expected to receive high denominations, while a majority of the peasants was only able to pay in base metal coinage. This was another stage in the activities of Papnuthis and Dorotheus: they had to convert the collected money into the desired denomination (as has been illustrated by *P. Oxy.* 3401).

In my opinion, there were two possible solutions to this problem, both illustrated by the texts above<sup>275</sup>: (a.) The *praepositus pagi* provided his staff with the amount of money due to the *ἀπαιτηταί* or other officials (as was initially the case in *P. Oxy.* 3393: however, Eulogius, failed to keep his promises and therefore the brothers had to borrow the money from private lenders). It can be expected from a 'district chief' that he was in the possession of enough silver and gold to pay the fiscal obligations for a complete village.<sup>276</sup> His staff could later regain the sum from the villagers on behalf of the *praepositus*.

The other option was illustrated by *P. Oxy.* 3401: (b.) In this case the *praepositus pagi* is not involved at all: his staff receives the base metal payments of the villagers, and

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<sup>275</sup> However, we are ignorant on how all this worked in actual practice. It is therefore impossible to say something in general about the situations described above. I have tried to deduce from the papyri some ways in which the ancients might have solved this problem.

<sup>276</sup> Cf. Banaji, *Agrarian change in Late Antiquity*, 213 (*op. cit.* n. 14): 'In gold the aristocracy rediscovered a powerful medium of accumulation, and the state a medium of taxation...'

converses it (on the market) into *solidi* or other desired currencies. This involved a serious element of economic speculation. One could suffer a loss when the rate of exchange was unfavourable or could make a nice profit (as obviously was the case with the Alexandrian).

From the above, it seems like taxes were only levied in money, but that is far from the truth. In this paragraph I have tried to give an account of the methods of Papnuthis and Dorotheus and their function in the system of collecting and levying taxes. In the next paragraph I will give an elaborate overview of all the taxes attested in the archive of Papnuthis and Dorotheus. It will be shown that they were not only responsible for the collection of money taxes but for a wide spectrum of taxes in money and in kind.

### 3.4 *Money and commodities: a fiscal inventory*

In the present paragraph I will give an alphabetically arranged overview of all the taxes mentioned in the archive of Papnuthis and Dorotheus, including those texts not published in the 48<sup>th</sup> volume of *The Oxyrhynchus papyri* (*supra* p. 91). I have to admit that the purpose of this discussion is somewhat ambivalent. On the one hand, it will demonstrate the wide range of taxes levied from the inhabitants of the Oxyrhynchite nome in the middle of the fourth century; but on the other hand, this list includes only a fraction of all the taxes levied, quite simply because an unknown number of texts carrying fiscal information and belonging to the correspondence in question did not survive. The fact that this rather extensive list presents only a fraction of the total emphasizes the idea of over-taxation, frequently suggested as

one of the causes of the decline of the Roman Empire.<sup>277</sup> However, the exact weight of a large number of taxes is unknown to us, and terminologically some taxes are misleading: e.g. the villagers paid the above-mentioned χρυσός των τρωώνων or the χρυσός των βουρδώνων most probably not in gold, but in lower denominations. In those cases where the amount due is stated, some taxes appear to have been fantastically low (e.g. three myriads of denarii for ‘γρι καὶ σιρώματος’<sup>278</sup>), while others were quite burdensome (e.g. ‘twenty solidi from the account of the χρυσάργυρον’<sup>279</sup>). Again, this quantification of information is rather misleading, since we are unfamiliar with the basis on which the tax was levied (the size of the estate, the length of the period paid for, etc.). But in my opinion, the quantity of the taxes alone will illustrate the pressure taxation exerted on the villagers of the Oxyrhynchite nome. After studying this list - realising that this is only a fraction of the total - it might be no surprise that some taxpayers collapsed under that fiscal pressure.<sup>280</sup>

Unfortunately, not all taxes are as well documented, as we would have liked them to be. The amount of information

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<sup>277</sup> A.H.M. Jones, ‘Over-taxation and the decline of the Roman Empire’, 82-89 (*op. cit.* n. 45); cf. Bernardi, ‘The economic problems of the Roman Empire at the time of its decline’ (*op. cit.* n. 117).

<sup>278</sup> SB V 7756, l. 3; however, see p. 76.

<sup>279</sup> P. Oxy. 3415, l. 6-7.

<sup>280</sup> Also see: R. MacMullen, ‘Tax-pressure in the Roman Empire’, *Latomus: revue d'études latines* 46 (1987) 737-754. In 2005, in the Netherlands, the Dutch government received € 123.4 billion from direct and indirect taxes, divided by the total population, each inhabitant paid € 7,567.90 (≈ 21,4% of the gross national income per capita). (Information can be verified in the statistical portal of the *Organisation for Economic Co-operation and Development* (OECD)-website.)

given on the specific taxes in the list below is therefore unevenly divided. After all, fiscal subjects like items related to the *annona* and the *vestis militaris* are much better attested than rather obscure levies like, for example, the *χρυσὸν της χαρύβδεως*. The entries in the inventory are arranged as follows: the Greek term is followed by a number between square brackets corresponding to the page in Lallemand, *L'administration civile de l'Égypte de l'avènement de Dioclétien à la création du diocèse*, where she has referred to that tax.<sup>281</sup> This number is succeeded by an English translation of the Greek term. Then, the attestations of the tax in the archive of Pappnuthis and Dorotheus are listed (in some cases I have added the possible attestations within the archive), and the entry is concluded with a discussion on the tax. (Again, in some cases we are so ill informed about the specific tax, that an elaborate discussion is impossible.)

*τὸ ἀναβολικὸν* [191-192]: 'the anabolikon'  
*P. Oxy.* 3408.11-12; *SB* 7756.5; *SB* 7756.17

The *ἀναβολικὸν* was a tax in kind that could be paid in every form of linen: linen proper, finished clothing, cloth, and perhaps tow.<sup>282</sup> It is not certain whether the tax was levied on a regular basis. Although the tax is attested as early as the first century AD (*O. Fay.* 49, l. 5 is dated in the sixth year of Tiberius' reign), the charge was clearly revised in the third century by emperor Aurelian: 'Aurelian established for the

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<sup>281</sup> Cf. Lallemand, *L'administration civile de l'Égypte de l'avènement de Dioclétien à la création du diocèse*, 191-205 (*op. cit.* n. 203).

<sup>282</sup> J.A. Sheridan, 'The anabolikon', *Zeitschrift für Papyrologie und Epigraphik* 124 (1999) 211-217.



city of Rome a tax from Egypt on glass, paper, linen, tow, and the anabolicae as permanent categories.<sup>283</sup> However, judged by the information in the papyri, linen and tow were part of the ἀναβολικόν and no category on itself.<sup>284</sup> The ἀναβολικόν has often been related - or even: equated - with the *vestis militaris*<sup>285</sup>, and although there are some similarities between the two, the differences are more important. The *vestis militaris* was, for example, levied on a regular base and on a much wider scale. It is not impossible that the ἀναβολικόν provided the army with linen (or: garments of linen) for special occasions.<sup>286</sup> The tax could not only be paid in kind, but in some instances it was adaeerated - as probably was the case in SB 7756, where 68 myriads of denarii were paid for one *kephalè*.

τὰ ἀννωνικὰ εἶδη [192]: ‘items of all sorts for the annona’

Certain attestations: P. Oxy. 3392.2-3 (annona); P. Oxy. 3408.22 (annonae); P. Oxy. 3423.10-14 (grain for the state ship); P. Oxy. 3423.15-17 (wine for the annona); P. Oslo 88.19 (the ἐμβολή of

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<sup>283</sup> SHA *Vita Aurelianus*, XLV.1: ‘vectigal ex Aegypto urbi Romae Aurelianus vitri, chartae, lini, stuppae, atque anabolicae species aeternas constituit.’ Cf. H.C. Youtie, ‘Parerga Ostracologia’, *Transactions and Proceedings of the American Philological Association* 73 (1942) 73-75.

<sup>284</sup> Sheridan, ‘The anabolikon’, 212 (*op. cit.* n. 282); cf. R. MacMullen, ‘The anabolicae species’, *Aegyptus: rivista italiana di egittologia e di papirologia* 38 (1958) 186.

<sup>285</sup> MacMullen, ‘The anabolicae species’, 198 (*op. cit.* n. 284); P. van Minnen, ‘Declaration of a *systates*’, in: F.A.J. Hoogendijk and P. van Minnen (edd.), *Papyri, ostraca, parchments and waxed tablets in the Leiden Papyrological Institute* (Leiden: Brill, 1991) 228 (=P. L. Bat. XXV 62); both relying heavily on the account of Wallace, *Taxation in Egypt from Augustus to Diocletian*, 214-219 (*op. cit.* n. 99).

<sup>286</sup> Sheridan, ‘The anabolikon’, 214 (*op. cit.* n. 282).

the grain<sup>287</sup>). Possible attestations: *P. Oxy.* 3392.5-6 (hay); *P. Oxy.* 3393.8 (public dues); *P. Oxy.* 3395.10-11 (clean wheat); *P. Oxy.* 3400.4 (grain); *P. Oxy.* 3408.7-8 (barley); *P. Oxy.* 3410.12-13 (wheat); *P. Oxy.* 3410.19 (grain); *P. Oxy.* 3420.15 (meat); *P. Oxy.* 3420.19 (chaff); *P. Oxy.* 3420.24 (each item); *P. Oxy.* 3420.30 (meat); *P. Oxy.* 3425.12 (meat)

The *annona* was the most important and most burdensome tax in the Roman Empire<sup>288</sup>, to which all men (and women) in the possession of land were liable. Originally the term *annona* denoted the ‘annual harvest’, but it soon came ‘to designate the provisioning of large communities (the city of Rome, the imperial army), and then, in the later Roman Empire, the tax in kind that supplied for such needs.’<sup>289</sup> The *annona* was of immense importance for the Roman government, since the revenue was used to provide the army with pay and provision, the wages of officials in the service of the imperial administration (increasingly paid in kind in the later Roman Empire<sup>290</sup>) and the food supply of the major cities of the empire.

In fact, there should be made a distinction between the *annona militaris*<sup>291</sup>, which was meant for the army and the

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<sup>287</sup> Cf. Bagnall, ‘Agricultural productivity and taxation in later Roman Egypt’, 303 (*op. cit.* n. 91).

<sup>288</sup> On the *annona* in the later Roman Empire, see the dissertation of Cérati, *Caractère annonaire et assiette de l’impôt foncier au Bas-Empire* (*op. cit.* n. 186).

<sup>289</sup> J.-M. Carrié, ‘Annona’, in: Bowersock, Brown and Grabar (edd.), *Late Antiquity*, 301 (*op. cit.* n. 10).

<sup>290</sup> Mickywitz, *Geld und Wirtschaft*, 167-168 (*op. cit.* n. 1).

<sup>291</sup> There has recently been published an extensive monograph on the *annona militaris*: F. Mitthof, *Annona militaris: die Heeresversorgung im*

administration (imperial as well as provincial), and the *annona civica*<sup>292</sup>, intended for Rome, Constantinople, Alexandria and a few other cities within the empire. Though, this distinction does not become clear from the imperial legislation: the *annona civica* is only mentioned once as a specific category in the heading of *Codex Theodosianus* XIV.17 (*De annonis civicis et pane gradili*).

We are getting informed by the legal sources about the contents of the *res annonaria* supplied to the army during expeditions: ‘*buccellatum ac panem, vinum quoque atque acetum, sed et laridum, carnem verbecinam...*’ (biscuit and bread, wine too and sour wine, but also bacon and lamb).<sup>293</sup> Fodder for the animals of the army was also part of the *annona militaris*.<sup>294</sup> The *annona civica* comprised roughly the same products in the later Roman Empire. For a long time, the *annona civica* included only wheat (since 58 BC distributed for free to the *plebs frumentaria* of Rome), but the system was radically reorganized in the third century. The size of the assortment

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*spätantiken Ägypten. Ein Beitrag zur Verwaltungs- und Heeresgeschichte des Römischen Reiches im 3. bis 6. Jh. n. Chr.* (Florence: Gonelli, 2001).

<sup>292</sup> Carrié, ‘Les distributions alimentaires dans les cités de l’empire romain tardif’ (*op. cit.* n. 215); A.J.B. Sirks, *Food for Rome: the legal structure of the transportation and processing of supplies for the imperial distributions in Rome and Constantinople* (Amsterdam: Gieben, 1991). For the supply of Rome in the Principate and the distribution of grain to the *plebs frumentaria* - the part of the population eligible to the distribution - see: D. van Berchem, *Les distributions de blé et d’argent a la plèbe romaine sous l’empire* (Genève: Georg & Cie S.A., 1939); Boek, ‘Broodnodige weldoenerij: graanuitdelingen in vroeg-keizerlijk Rome’ (*op. cit.* n. 216).

<sup>293</sup> *Codex Theodosianus* VII.4.6 (360); cf. A. Déleage, *La capitation dus Bas-Empire* (Mâcon: Imprimerie Protat Frères, 1945) 40.

<sup>294</sup> Karayannopulos, *Das Finanzwesen des frühbyzantinischen Staates*, 99 (*op. cit.* n. 72).

was doubled during the reign of Septimius Severus with the addition of olive oil<sup>295</sup>, distributed for free to the beneficiaries. However, the biggest changes took place under Aurelian: he stopped the distribution of wheat and started distributing bread instead<sup>296</sup>, and, besides, he added pork and wine to the *annona civica*.

The *annona* is by far the most frequently attested fiscal charge in the archive of Papnuthis and Dorotheus. But in all cases - but one - it is impossible to say whether the revenue was destined for the army or for the inhabitants of the major cities: the fresh hay from *P. Oxy.* 3392 was most probably destined as fodder for the draught animals of the army or the *cursus publicus*. The meat - attested in *P. Oxy.* 3420 and 3425 - was probably meant for (provincial) officials in Egypt: it could not be transported over long distances due to the perishable character of the product. This was obviously not the case with grain and wine, which could have been transported to all parts of the empire.

τὰ ἀργυρία της Ἰνδίας [-]: ‘the money for India’  
*P. Oxy.* 3408.17-19; *SB* 7756.8; *SB* 7756.17-18

The ‘money for India’ (*P. Oxy.* 3408) or ‘for the ships to India’ (*SB* 7756) was evidently a tax in money. In the former papyrus the tax amounted to forty myriads of *denarii* per head (τῆ

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<sup>295</sup> H. Pavis d’Escurac, *La préfecture de l’annone: service administratif impérial d’Auguste à Constantin* (Rome: École française de Rome, 1976) 188-201.

<sup>296</sup> *Scriptores Historiae Augustae* (Aurelianus), XXXV.1, XLVIII.1-4.

κεφαλῆ)<sup>297</sup>, the latter text gives a slightly higher rate - although the reading is doubtful - of 50 <sup>1</sup>/<sub>6</sub> or 56 myriads of *denarii* per head. Although the tax was collected in myriads of *denarii*, it is highly probable that the mechanism of conversion described above was also applied to this levy, because the complete line reads as follows: ‘τὰ ἀργυρία της Ἰνδίας τῆ κεφαλῆ σὺν ἀλλαγῆς (δηναρίων) (μυριάδας) μ’ ([and for] the money for India forty myriads of *denarii* per head including exchange’). The levy was collected in *denarii*, but this amount included a fee for the exchange of the denomination - probably from debased silver coinage into gold.

The reference to trade between the Roman Empire and India in the archive is highly interesting, since the trade with India was much affected by the crisis of the third century AD. At that time, the Indians were in contact for a long period with the people of the Mediterranean. Herodotus already dedicated a few *capita* in his third book to that strange people living near the river Indus (III.97-III.106).

Since the second century BC, Ptolemaic Egypt and the southern Indian regions traded at a regular base via maritime routes, and incidental contact had existed before.<sup>298</sup> The trade

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<sup>297</sup> Since the total yield of the tax (levied in the village Psobthis) is stated at 5,120 myriads of *denarii* (34,133 T.), 128 persons were liable to the tax - if each of them contributed 40 myriads.

<sup>298</sup> M.G. Raschke, ‘Papyrological evidence for Ptolemaic and Roman trade with India’, in: P.J. Parsons (ed.), *Proceedings of the XIVth International Congress of Papyrologists, Oxford, 24-31 July 1974* London: Egypt Exploration Society, 1975) 241-245; S.E. Sidebotham, ‘Ports of the Red Sea and the Arabia-India trade’, *Münstersche Beiträge zur antiken Handelsgeschichte* 5.2 (1986) 16-36; R. Tomber, ‘Indo-Roman trade: the ceramic evidence from Egypt’, *Antiquity: a quarterly review of archaeology* 74 (2000) 624-631.

between India and the Roman Empire reached its zenith in the ‘Golden Age’ of the Antonines (maritime and over land), but declined soon after due to the empire’s internal problems. However, relations were restored - though at a smaller scale - after the Diocletianic and Constantinian reforms.<sup>299</sup> It has been suggested that this renewed trade must have been gone by sea, because warfare between the Roman Empire and Persia made trade over land impossible<sup>300</sup>: this would perfectly explain the fact why the charge is called *ναυτῶν Ἰνδίας* in *SB V 7756*.

I agree with the editor of the *editio princeps* that the ‘money for India’ was no trade tax, but a tax ‘imposed to defray certain expenses in connexion with the Indian trade’ most probably by the (central) government to revive commercial relations with India.<sup>301</sup> After all, we have no indications that Philadelphè, the woman liable to the tax in *SB V 7756*, was involved in any trading activities, nor is it - in my opinion - possible that 128 persons from a single village liable to the tax in *P. Oxy. 3408* were all involved in the trade with India.

γρι καὶ σιρώματος [202]: ‘[charge for] impurities and storage fees’ or ‘[charge for] the digging and the construction of the silos’

*SB 7756.3; SB 7756.16*

Both these terms were unknown to the editor of the *editio princeps*, and there is still no certainty about the meaning of

<sup>299</sup> Bell, ‘A Byzantine tax-receipt’, 109 (*op. cit.* n. 199).

<sup>300</sup> H. Kortenbeutel, *Der ägyptische Süd- und Osthandel in der Politik der Ptolemäer und römischen Kaiser* (Charlottenburg: Gebr. Hoffmann, 1931) 75.

<sup>301</sup> Bell, ‘A Byzantine tax-receipt’, 110 (*op. cit.* n. 199).

the two words. Together, they clearly expressed a single charge, but the tax can hardly be called burdensome, as it was only three myriads of denarii τῆ κεφαλῆ. It was suggested by H.I. Bell that γρι (= cic<c>um: γρυ, κόκκος) could be a charge for impurities of the grain (cf. *P. Oxy.* 3400.4-5: ‘their grain consisted of barley’).<sup>302</sup> In his edition of the text Roger Rémondon interpreted γρι as a charge for digging, referring to the philological similarities with the Coptic equivalent.<sup>303</sup>

The interpretation of the second term is also uncertain. Bell suggested a charge for the storage of grain<sup>304</sup> (ὁ σιρός: pit for keeping corn), Rémondon interpreted σιρώματος as ‘aménagements de silos’, what emphasizes the process of construction of the pit/silo instead of the function of the building. If this latter interpretation is correct, the charge of three myriads of denarii τῆ κεφαλῆ is unbelievably low; however, the reading of γ’ (3) is disputable. Although γ’ remains the most likeliest reading, ι’ (10) or ρ’ (100) are possible either.

τα δημόσια [-]: ‘the public dues’  
*P. Oxy.* 3393.8

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<sup>302</sup> Ibidem, 108; also see: P. Mayerson, ‘sitos/puros in Egypt as deliberate mixtures of wheat with barley’, *Bulletin of the American Society of Papyrologists* 42 (2005) 51-62.

<sup>303</sup> Rémondon, ‘La date de l’introduction en Égypte du système fiscal de la capitation’, 432 (*op. cit.* n. 187). Cf. W.E. Crum, *A Coptic dictionary* (Oxford: Clarendon Press, 1962) 828.

<sup>304</sup> Cf. Déléage, *La capitation du Bas-Empire*, 112 (*op. cit.* n. 293): ‘la taxe d’entrepôt des grains’.

The public dues (or: ‘state dues’<sup>305</sup>) are interpreted by Grenfell and Hunt in the introductions to *P. Fay.* 81 and *P. Tebt.* II 365. It will suffice here to cite their conclusion: ‘We prefer therefore to interpret the payments δημοσίων throughout *sitologus*-receipts in the more natural sense of ‘for δημόσια’, [...] they are to be regarded as in the main rents on δημόσια γη, and the people who paid ὑπὲρ δημοσίων are probably to be considered δημόσιοι γεωργοί in all cases.’<sup>306</sup> In the context of the archive of Papnuthis and Dorotheus, τα δημόσια were the taxes in kind that had to be collected by the two brothers from the tenants of public state land, and afterwards had to be turned over to the ἀπαιτηταί.

ἡ διῶρυξ Ἀλεξανδρείας [202]: ‘[the charge for] the canal of Alexandria’

SB 7756.1; SB 7756.15-16

The canals of Alexandria were numerous and it is hard to establish with any certainty which canal is meant in the context of this papyrus: the most important canal linked Alexandria with the Nile, but branches of that same canal linked the city with Lake Mareotis and with the sea.<sup>307</sup> The

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<sup>305</sup> D. Hobson, ‘A *sitologos* receipt from Soknopaiou Nesos’, *Zeitschrift für Papyrologie und Epigraphik* 99 (1993) 74.

<sup>306</sup> B.D. Grenfell and A.S. Hunt, *The Tebtunis Papyri II* (London: Henry Frowde, 1907) 202. Cf. D. Rathbone, ‘Egypt, Augustus and Roman taxation’, 83 (*op. cit.* n. 75); and Rowlandson, *Landowners and tenants in Roman Egypt*, 63-69 (*op. cit.* n. 224).

<sup>307</sup> Strabo XVII.7 (translation by H.L. Jones, edition: Loeb Classical Library): ‘The place is washed by two seas, on the north by the Aegyptian Sea, as it is called, and on the south by Lake Mareia, also called Mareotis. This is filled by many canals from the Nile, both from



editors of *P. Lond.* IV 1353 have suggested that the *διῶρυξ Ἀλεξανδρείας* mentioned in that text probably was the ancient equivalent of the modern al-Mahmūdiyyah canal<sup>308</sup>, which followed roughly the same course as the ancient canal linking the city of Alexandria to the Nile. This ancient canal was also called the Canopic or Schedia canal.<sup>309</sup> H.I. Bell suggested that the canal was cleaned and repaired from the revenue of the charge (73 myriads of denarii *τῆ κεφαλῆ*), so that the commercial activities of Alexandria were not hampered by unnavigable routes through a silted-up canal.<sup>310</sup>

ὁ ἐξαργυρισμός [198]: ‘adaeratio’, ‘commuted tax’

Certain attestations: *P. Oxy.* 3404.14 (chaff); *P. Oxy.* 3410.14-18 (barley); *P. Oxy.* 3415.10-12 (grain). Possible attestations: *P. Oxy.* 3408.14-15 (barley); *P. Oxy.* 3420.15 (meat); *P. Oxy.* 3420.16-19 (chaff); *P. Oxy.* 3428.16 (wax); *P. Oxy.* 3428.19 (woad)

Strictly speaking, the *adaeratio* was not a tax on its own, but a technical term used in Late Antiquity to denote a payment in

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above and on the sides, and through these canals the imports are much larger than those from the sea, so that the harbour on the lake was in fact richer than that on the sea.’; C. Haas, *Alexandria in Late Antiquity: topography and social conflict* (Baltimore/London: Johns Hopkins University Press, 1997) 365-366.

<sup>308</sup> H.I. Bell, *Greek papyri in the British Museum. Volume IV: The Aphrodito Papyri* (London, 1910) 28 (= *P. Lond.* IV); A. Calderini, *Dizionario dei nomi geografici e topografici dell’Egitto greco-romano* (Cairo: Società Reale di Geografia d’Egitto, 1935) 85. (The construction of the modern al-Mahmūdiyyah canal was initiated by Muhammad Ali, the viceroy of Egypt, and was opened in 1820.)

<sup>309</sup> M. Rodziewicz, ‘Alexandria and district of Mareotis’, *Graeco-Arabica* 2 (1983) 206, n. 36.

<sup>310</sup> Bell, ‘A Byzantine tax-receipt’, 108 (*op. cit.* n. 199).

money for taxes that actually had to be paid in kind. According to MacMullen were the only commuted taxes in kind on grain - wheat, barley and emmer - because other items like chaff, vegetables and wine were 'readily available in most districts' and 'the tax was most often payable in money'; or on textiles, which was not manufactured everywhere and so had to be commuted in money.<sup>311</sup> However, two attestations of adaerated taxes in the archive of Papnuthis and Dorotheus are about chaff (*P. Oxy.* 3404: 'the value of the chaff'; *P. Oxy.* 3420: 'concerning 10,000 pounds of chaff again you did not even state the price'). In a substantial number of cases the adaerated taxes were commuted in money, because they were payments of (last years) arrears. This was also the case in *P. Oxy.* 3410 and 3415.

In times of inflation, taxpayers could benefit if they were allowed to pay in money instead of in kind. Certainly in the period of 'hyperinflation' in the decades before the accession of Diocletian and in the mid-fourth century, coinage devaluated at such a high pace that the commuted tax paid in money was only a fraction of the value of the tax that originally had to be paid in kind. This possible benefit to the taxpayer is also implied by *P. Oxy.* 3404, l. 15: 'συνφέρι γὰρ αὐτῷ' ('For it is to his advantage.')<sup>312</sup>

The principle of *adaeratio* was closely related to the collection of the *annona*, for most commuted taxes were

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<sup>311</sup> R. MacMullen, 'Some tax statistics from Roman Egypt', *Aegyptus: rivista italiana di egittologia e di papirologia* 42 (1962) 98.

<sup>312</sup> However, according to K.A. Worp this line could also be interpreted as a veiled threat to Heras, the person who is supposed to hand over the money for the chaff: 'He better be paying the value of the chaff, or otherwise...'

originally destined for the army (*annona militaris*).<sup>313</sup> The later Roman government was, therefore, closely involved with the (prohibition of) commutation as is shown by numerous laws in the Codes concerning the *adaeratio*.<sup>314</sup> However, when we take a closer look at the statistics given by MacMullen, it becomes clear that taxes were commuted more and more frequent from the reign of Constantine onwards.<sup>315</sup>

τὸ ἔριον [-]: ‘the wool’  
*P. Oxy.* 3420.37; *P. Oxy.* 3428.19

Obviously, this was a tax levied in kind. It appears from *P. Oxy.* 3420 that the burden of the collection is ‘divided up according to sheep’, i.e. the more sheep one owned, the higher the levy - for the individual contributor - would be. In *P. Oxy.* 3428, wool is levied together with woad (see below, cf. *P. Oxy.* VII 1052). It is not inconceivable that the wool was destined to be dyed with the pigments from the woad.

ἡ ἐσθής στρατιωκῆ [193-194]: ‘the vestis militaris’  
*P. Oxy.* 3403.8-9; *P. Oxy.* 3404.12

The *vestis militaris* was a tax in money, although it has been suggested - mainly by the vocabulary used in the papyri - that it was levied in kind.<sup>316</sup> However, according to the

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<sup>313</sup> K.L. Noethlichs, ‘Spätantike Wirtschaftspolitik und Adaeratio’, *Historia: Zeitschrift für alte Geschichte* 34 (1985) 102-116.

<sup>314</sup> Mickwitz, *Geld und wirtschaft*, 169-175 (*op. cit.* n. 1).

<sup>315</sup> MacMullen, ‘Some tax statistics from Roman Egypt’, 99 (*op. cit.* n. 311).

<sup>316</sup> Sheridan, *Columbia Papyri IX*, 90-92 (*op. cit.* n. 169).

*communis opinio* no individual taxpayer ever paid this tax in kind, since the papyri mention payments in fraction of garments - impossible to be paid in kind.<sup>317</sup> After the money was collected, it was converted into military garments by tax officials: they ordered the weavers to fabricate a number of garments due and paid them with the money collected from those liable to the tax. It has been suggested that a ‘clothing vocabulary’ (e.g. ‘Throughout Egypt and the districts of the Orient one outfit shall be furnished for each thirty land tax units.’<sup>318</sup>) was employed to comfort the taxpayers: they knew where their money was going to be used for.<sup>319</sup>

In our archive there are no specific attestations of the levying of the tax, but in two cases there are implicit references to it. In *P. Oxy.* 3403, l. 8-9 Papnuthis is requested (by his mother, on behalf of his wife) to send the ‘money for the wages of the wool-workers.’ This could be interpreted as the money collected by Papnuthis to pay the manufacturers of the garments for the *vestis militaris*. Another implicit reference could be found in *P. Oxy.* 3404, where one Hieracion instructs Papnuthis to pay him an amount of money ‘for you know that if you had not reported I would not have given the cloaks.’ Again, the exact contents are not clear, but it might

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<sup>317</sup> Extensive research on this subject has been done by Jean-Michel Carrié. Cf: Carrié, ‘L’Egypte au IVE siècle: fiscalité, économie, société’, 434-435 (*op. cit.* n. 191); idem, ‘L’esercito: trasformazioni funzionali ed economie locali’, in: A. Giardina (ed.), *Società romana e impero tardoantico. I: Istituzioni, ceti, economie* (Bari: Laterza, 1986) 464-465; idem, ‘Observations sur la fiscalité du IVE siècle’, 117-123 (*op. cit.* n. 63).

<sup>318</sup> *Codex Theodosianus*, VII.6.3 (translation by C. Pharr): ‘per Aegyptum et Orientis partes in triginta terrenis iugis.’ This law is dated at August 9, 377.

<sup>319</sup> Sheridan, *Columbia Papyri IX*, 91-92 (*op. cit.* n. 169).

well be that Hieracion paid for the cloaks in advance (perhaps did Papnuthis and Dorotheus not collect enough money for the *vestis militaris*), and now asks back the amount he had lend out to them.

ἡ ἰσάτις [-]: ‘the woad’

*P. Oxy.* 3428.19

Woad or *Isatis tinctoria* is a plant in the family *Cruciferae*. Until well in the modern era woad was the only source for blue dye available. Interesting in respect to the cultivation of the plant is that there was a so-called ‘Anbauverbot’ in the Oxyrhynchite nome: it was prohibited to grow woad as a private enterprise.<sup>320</sup> It is in the line of expectation that the government monopolized the cultivation of woad to use the dye for special garments. Unfortunately, we are not informed about this. Just as in *P. Oxy.* 1052 (also written in the mid-fourth century) the woad is collected together with an (unspecified) amount of wool. It is not inconceivable that this wool was destined to be dyed by the woad.

τό ζμήνος [-]: ‘the bee-hive’ / ὁ κηρός [-]: ‘the wax’

*P. Oxy.* 3410.10-12; *P. Oxy.* 3412.6; *P. Oxy.* 3428.16

Although the levying of wax has not been attested too often as a fiscal charge, our information is rather extensive on the collection and the use of wax. Wax could be used for many

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<sup>320</sup> D. Hagedorn, ‘Zum Anbauverbot von ἰσάτις, ὄχομένιον und κνηκός’, *Zeitschrift für Papyrologie und Epigraphik* 17 (1975) 85-90.

different purposes<sup>321</sup>: for the manufacture of art (wax-paintings, the casting of bronze by the *cire perdue* method, death masks, etc.), the preparation of medicines, the production of candles, but it was mainly used for writing-tablets. This also explains - in my opinion - why the levy in *P. Oxy.* 3412 was destined for Alexandria. This metropolis was the cultural and governmental capital of Egypt and therefore a large-scale consumer of wax.

Generally speaking, the wax should have been levied in kind, but the tax could also be commuted into money (cf. *P. Oxy.* 3428, and perhaps also *P. Oxy.* 3412<sup>322</sup>). The levy in *P. Oxy.* 3412 appears rather burdensome - ten pounds of wax per beehive<sup>323</sup> - but, on the other hand, we do not know how frequent the tax was levied and we are neither informed about the size of the hive. However, according to pseudo-Aristotle an exceptionally good hive of average size would have yielded eighteen pints of honey<sup>324</sup> (i.e. fourteen kilograms of honey) and since the beeswax yield of traditional hives was around 8-10% of the honey yield, the maximum amount of beeswax per hive would have been 1.4 kilograms.<sup>325</sup> It might be concluded that it was impossible

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<sup>321</sup> For an extensive discussion see: H. Chouliara-Raïos, *L'abeille et le miel en Egypte d'après les papyrus grecs* (Ιωαννίνα: Φιλοσοφική Σχολή Πανεπιστήμιο Ιωαννίνων, 1989) 174-192; R. Buell and E. Moser, 'Wachs', *Pauly's Realencyclopädie der classischen Altertumswissenschaft, Supplementband XIII* (1973) 1347-1416.

<sup>322</sup> Chouliara-Raïos, *L'abeille et le miel en Egypte*, 168 (*op. cit.* n. 321).

<sup>323</sup> A Roman pound was ca. 327 grams; the Greek word for 'pound' (λίτρα) was etymologically related to the Roman word 'libra'.

<sup>324</sup> (Pseudo-) Aristotle, *Historia animalium*, IX.40.627b.

<sup>325</sup> E. Crane, *The world history of beekeeping and honey hunting* (London: Duckworth, 1999) 497.

that this charge was assessed annually, since it would have taken two years and four months for an average hive to produce the amount due. Another possibility would be that the hives were of exceptional size. It is best to leave the matter undecided here, but still the levy appears to have been rather burdensome.

ἡ καθολικότης [201]: '[the amount due to] the catholicus'  
*P. Oxy.* 3408.27; *P. Oxy.* 3410.8-9; *P. Oxy.* 3416.5-6; *P. Oxy.*  
 3423.18-20; *P. Oxy.* 3428.19; *P. Oslo* 88.25.

The catholicus was the financial official responsible for the whole of Egypt (and Libya, since his official title was *καθολικός ἐπαρχείας Αἰγύπτου καὶ Λιβύης*).<sup>326</sup> The office of catholicus was established in 286 by Diocletian, and probably replaced (or displaced) the office of *διοικητής*, which was the name of the imperial financial official in the third century.<sup>327</sup> The catholicus of Egypt and Libya was responsible for the private treasury of the emperor (*rationalis res privata*) as well as the administration of public revenues (*rationalis summarum* or *rationalis rei summae*).<sup>328</sup> The catholicus resided in Alexandria together with his staff, though it is well possible that staff-members were sometimes sent to the provincial cities

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<sup>326</sup> *P. Oxy.* XII 1410.

<sup>327</sup> Cf. Lallemand, *L'administration civile de l'Égypte de l'avènement de Dioclétien à la création du diocèse*, 81 (*op. cit.* n. 203); D. Hagedorn, 'Zum Amt des διοικητής im römischen Aegypten', *Yale Classical Studies* 28 (1985) 67-210.

<sup>328</sup> Delmaire, *Largesses sacrées et res privata*, 181-190 (*op. cit.* n. 220); Jones, *The later Roman Empire, 284-602, 411-427* (*op. cit.* n. 7).

It is difficult to establish the exact meaning of the taxes owed to (the office of) the *catholicus*, since we do not know whether the revenue of this tax was used to pay the staff of the *catholicus*; or whether it was destined for the public treasury, or even for the *catholicus* himself. In *P. Oslo* 88, l. 25 ‘the [not further specified] items owed to the *catholicus*’ are mentioned, in this case we are ignorant too what items were used for what purpose. However, it is well possible that the taxes in kind levied in favour of the *catholicus* were used to supply his ‘court’ or his staff as seems to be the case in *P. Oxy* 3391, where ‘my lord the count’ might refer to the *catholicus*, l. 3-6: ‘Supply the *officiales* of my lord the count for their needs with ten pounds of meat.’

ὁ κηρός (see: τό ζμήνος)

τὰ κούμουλα [-]: ‘the *cumuli*’

*P. Oxy.* 3395.12

The term is not often attested in papyrological documents, and as a tax it has only appeared in four texts (including *P. Oxy.* 3395).<sup>329</sup> In two other texts it appeared as a measure of volume, signifying  $\frac{1}{30}$  artaba. As, for I believe, J.C. Shelton has explained the meaning of the term as a tax in a scholarly note rather clear, I will cite him here: ‘A *cumululus* of  $\frac{1}{30}$  artaba was equal to the difference between a *modius xystus* and a

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<sup>329</sup> P.J. Sijpesteijn and K.A. Worp, ‘Ein neues Archiv: Hermias und Maximos, Söhne des Sarapion’, *Zeitschrift für Papyrologie und Epigraphik* 32 (1978) 255 (= SB XIV 12217.10); *P. Flor.* I 75.21; and *P. Cair. Goodsp.* 14.7.



*modius cumulatus*, so one might speculate that *cumuli* were charged when grain paid in by the first unit had been due in the second.<sup>330</sup> In respect to the text, this would mean that τὰ κούμηλα - as it is miswritten in *P. Oxy.* 3395 - were an additional charge in kind on the wheat (in this case the sizeable amount of thirty-five artabas) transferred by Papnuthis and Dorotheus to a skipper, who shipped the grain to its next destination (possibly from one of the villages in the countryside to the city of Oxyrhynchus).<sup>331</sup>

ἡ Κωνσταντινοπόλις [-]: '[the account of] Constantinople'  
*P. Oxy.* 3415.8-9; *P. Oslo* 88.11

In fact, the exact nature of this tax is unknown and the suggestions to follow, therefore, highly speculative. The editor of *P. Oslo* 88 has suggested that this charge referred to the grain supply of Constantinople: 'Concerning [the charge for] Constantinople, you have not sent the comarchs, neither the gold.' However, this struck Shelton as highly unlikely, since a similar situation occurs in *P. Oxy.* 3397: 'If you know that the comarchs have refused to turn over these (sums), send me the comarchs and I shall make them pay them all in

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<sup>330</sup> Shelton, *The Oxyrhynchus papyri. Volume XLVIII*, 91 (note on *P. Oxy.* 3395). Cf. H.I. Bell, '[review of A.C. Johnson and L.C. West, *Byzantine Egypt: economic studies* (Princeton: Princeton University Press, 1949)]', *The Journal of Roman Studies* 40 (1950) 127-128.

<sup>331</sup> One artaba of wheat equalled five *modii xysti*, see: A. Segrè, *Metrologia e circolazione monetaria degli Antichi* (Bologna: Zanichelli, 1928) 35-37. Therefore, the total additional charge would have been  $(35 \cdot 5) \cdot \frac{1}{30} = 5 \frac{5}{6}$  artabas of wheat.

the city.’ It would indeed be more logical if the charge for Constantinople was a tax in money (*in casu*: in gold).<sup>332</sup>

However, in *P. Oxy.* 3415 there has been a curious slip of the pen - or not. Instead of *Κωνσταντινοπόλις*, the author of the text (the *praepositus pagi* Diogenes), wrote *Κωνσταντιανοπόλις*. The editor of the text was of the opinion that there could be no real doubt that the word was miswritten for Constantinople (on the Bosphorus). However, in Upper Egypt there was a place named *Κωνσταντίνη πόλις*.<sup>333</sup> I have to admit that a tax in favour of Constantinople-on-the-Bosphorus would be the better alternative, but we cannot assume this without further ado. Therefore, I will leave the case undecided here.

*τό λίνον* [-]: ‘the flax’ or ‘the linen’ / *τό σίπιον* [-]: ‘the tow’  
*P. Oxy.* 3408.9 (tow); *P. Oxy.* 3408.29 (flax); *P. Oxy.* 3410.7-8 (flax); *P. Oxy.* 3410.13-14 (tow); *P. Oxy.* 3416.5-7 (tow); *P. Oxy.* 3423.9 (tow); *SB* 7756.12 (tow); *P. Oslo* 88.8 (linen); *P. Oslo* 88.27 (linen)

It is rather difficult to interpret these attestations, because flax and linen could be used in many different ways. Linen is made from the fibres of the flax plant and, as a tax in kind, linen should probably be interpreted as part of the *ἀναβολικόν*.<sup>334</sup> I would like to suggest that the linen was collected as part of the *annona militaris* and used for the

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<sup>332</sup> Shelton, *The Oxyrhynchus papyri. Volume XLVIII*, 122 (introduction to *P. Oxy.* 3415).

<sup>333</sup> Calderini, *Dizionario dei nomi geografici e topografici dell’Egitto greco-romano* III, 173 (*op. cit.* n. 223).

<sup>334</sup> Déléage, *La capitation du Bas-Empire*, 80 (*op. cit.* n. 293).

ἀναβολικόν. Then, the linen was processed into ceremonial uniforms for rare occasions, such as an imperial visit.<sup>335</sup> The Egyptian linen was praised by Plinius Maior for its brilliant whiteness and softness: ‘Nec ulla sunt cum candore molliora pexiorave. Vestes inde sacerdotibus Aegypti gratissimae.’<sup>336</sup> This is also an indication that linen was used for ceremonial outfits.

Besides for the production of textiles, linen was also used for the manufacturing of sails, hunting- and fishing nets. But not only the fibres of the flax were used, the seeds too could be processed into linseed oil or (components of) medicines.<sup>337</sup> Despite this wide range of possibilities the connection with the ἀναβολικόν is in my opinion the best option to interpret the linen tax.

Another by-product of flax frequently mentioned in the papyri is tow (τὸ σίπιον). Tow was primarily used for manufacturing coarse fabric, for upholstery, and for ropes and twine. As was said above, it could also be levied for the ἀναβολικόν.

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<sup>335</sup> Sheridan, ‘The anabolikon’, 214 (*op. cit.* n. 282).

<sup>336</sup> Plinius Maior, *Naturalis historia* XIX.14.

<sup>337</sup> Lewis, *Life in Egypt under Roman rule*, 127-128 (*op. cit.* n. 76).

τό ναῦλον [203]: ‘the freight charge’

*P. Oxy.* 3395.12-13; *P. Oxy.* 3424.3-4; *P. Oxy.* 3428.16; *P. Oslo* 88.21; *SB* 7756.6

According to Karayannopoulos the freight charges were ‘zusätzlichen Belastungen [...] für den Transport der Sachsteuern zu Wasser’.<sup>338</sup> In mythology, the meaning of the term was almost analogous to its fiscal counterpart: the reward to Charon for the journey across the river of/to the Underworld was also called τό ναῦλον. Karayannopoulos suggested too that τό ναῦλον was an additional tax levied in terms of percentage, but this is not indicated by the attestations of the tax in the archive of Papnuthis and Dorotheus. Even if Karayannopoulos was right, it could only be a percentual tax on the value of the freight, since the charge was paid in money.<sup>339</sup> Why the transport costs for shipping were levied requires no explanation: the main road of Egypt was the river Nile.

τὰ πρόσκαιρα [-]: ‘the occasional charges’

*P. Oxy.* 3392.2; *P. Oxy.* 3427.3

Occasional charges (or superindictions) were levies authorized by the emperor himself, when there was a sudden need for money, e.g. in times of emergency. In *P. Oxy.* 3427 it

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<sup>338</sup> Karayannopoulos, *Das Finanzwesen des frühbyzantinischen Staates*, 124 (op. cit. n. 72). The freight charge for transport over land was called *τιμὴ κτηνῶν δημοσίων*; *ibidem*, 125.

<sup>339</sup> The addition in *SB* V 7756, l. 12 is somewhat confusing in this respect. It appears that 2 1/3 bundles of tow are added to the charge of 25 myriads of denarii for the transport of the tow.

is specified that the revenue of the tax is used for ‘the repair of the boats’. It is not inconceivable that a part of the (commercial or military) fleet was destroyed in a storm or a battle, and was in need of reparation. The tax was levied in money, but - in my opinion - it would also have been possible that the tax was levied in kind (for example: it was also possible to collect linen for the repair of the sails of the above-mentioned boats). The exceptional character of the levy is emphasized by the contrast with *κανονικά* (standard charges) in e.g. *P. Cair. Masp.* II 151.73).<sup>340</sup>

*τὸ πρωτίον* [-]: ‘first quality’ or ‘first fruits’  
*P. Oxy.* 3408.12; *SB* 7756.4; *SB* 7756.16-17

There is no real clue to the meaning of *τὸ πρωτίον* and the above-mentioned attestations are the only certain references in the papyrological sources to a tax called ‘the proteion’.<sup>341</sup> The editor of the *editio princeps* of *SB* 7756 has suggested a meaning relating to the quality of an unknown product (cf. *BGU* III 950, l. 4: ‘*πρωτεῖος*’). In his interpretation of the text, Roger Rémondon has suggested that the product that fitted best in this quality-scheme would be wine: ‘*καὶ πρωτίου καὶ δευτερίου*’ could then be translated as ‘first and second quality wine’.<sup>342</sup> However, Johnson and West suggested that

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<sup>340</sup> *P. Cair. Masp.* II 67151, l. 73 n.; Karayannopoulos, *Das Finanzwesen des frühbyzantinischen Staates*, 139 (*op. cit.* n. 72).

<sup>341</sup> Shelton, *The Oxyrhynchus papyri. Volume XLVIII*, 112.

<sup>342</sup> Rémondon, ‘La date de l’introduction en Égypte du système fiscal de la capitation’, 432 (*op. cit.* n. 187).

the term could best be translated as ‘first instalment’.<sup>343</sup> It would be best to leave to matter undecided due to the lack of any decisive evidence.

ἡ προσαίτησις [-]: ‘additional demand’  
*P. Oxy.* 3424.1

The *προσαίτησις* is used as an umbrella-term for a list of charges collected over (and above) the sums that have already been taken in.<sup>344</sup> The charges were levied in money. The word seems to be new in this papyrus, but it can best be compared with the above-mentioned ‘occasional charges’ (*τὰ πρόσκαιρα*). In case of the occasional charges it is known that they were levied in extraordinary situations, it is not known when *ἡ προσαίτησις* was levied as superindiction - though perhaps the additional money was levied when the necessary officials were to make up a deficit.

ὁ σακκοφορικός [-]: ‘the porterage fees’  
*P. Oxy.* 3395.13

This charge on the porterage of freight is only attested in the papyrological evidence at five places (including this one).<sup>345</sup> The term is derived from the Greek word for porter: ὁ

<sup>343</sup> A.C. Johnson and L.C. West, *Byzantine Egypt: economic studies* (Princeton: Princeton University Press, 1949) 266.

<sup>344</sup> Shelton, *The Oxyrhynchus papyri. Volume XLVIII*, 136.

<sup>345</sup> The other attestations are: *P. Cair. Goodsp.* 14, l.7, *SB XII 11036*, l. 7, *SB XIV 11548*, l. 10 (cf. P.J. Sijpesteijn and K.A. Worp, ‘Documents on transportation by ship’, *Zeitschrift für Papyrologie und Epigraphik* 20 (1976) 159) and *P. Flor.* I 75, l. 25 (in the latter case a synonym is used: ‘σακκοφορικοί μισθοί’).

σακκάς, also known in Latin: *saccarius*.<sup>346</sup> In *P. Oxy.* 3395 it was paid together with the shipping costs: τὰ ναυλα. It is not known whether the σακκοφορικός was paid to cover the costs of the loading and discharging of the freight or whether it was used to pay the wages of the dockworkers in Alexandria.<sup>347</sup>

τὸ σίππιον (see: τὸ λίνον)

ὁ σιρώματος (see: γρι καὶ σιρώματος)

τὸ τέλοςμα [-]: 'the payment'

*P. Oxy.* 3394.5; *P. Oxy.* 3399.4-7; *P. Oxy.* 3399.8; *P. Oxy.* 3402.4-5; *P. Oxy.* 3402.6; *P. Oxy.* 3412.9.

In four papyri we find sums of collected money, of which the purpose of the levy is not further specified. In *P. Oxy.* 3394 the two brothers borrowed money 'to pay the 'holy' taxes into the most sacred treasury' (they use such grandiloquent language in this text, because the petition is addressed to the *praefectus Aegypti*), and in *P. Oxy.* 3412 there is simply talk of 'the silver money'. However, this silver money should be sent by a certain Copreus, who possibly also appears as σύμμαχος in *P. Oxy.* 3416, l. 14.<sup>348</sup> The quantitatively specified amounts

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<sup>346</sup> Boek, 'Broodnodige weldoenerij: graanuitdelingen in vroeg-keizerlijk Rome', 12 (*op. cit.* n. 216); G. Rickman, *The corn supply of ancient Rome* (Oxford: Clarendon Press, 1980) 20.

<sup>347</sup> A.J.M. Meyer-Termier, *Die Haftung der Schiffer im griechischen und römischen Recht* (Zutphen: Terra, 1978) 13-14.

<sup>348</sup> Cf. S.B. Pomeroy, 'Copronyms and the exposure of infants in Egypt', in: R.S. Bagnall and W.V. Harris (edd.), *Studies in Roman law in memory of A. Arthur Schiller* (Leiden: Brill, 1986) 147-162. In *P. Oxy.* 3416 Copreus is

of money in *P. Oxy.* 3399 and 3402 (a total of 427,500,000 myriads of denarii and 6 solidi) are also sent from one brother (residing somewhere in the countryside) to the other (in the city of Oxyrhynchus) by a guard (ὁ φύλαξ and ὁ φρουρός). It appears to be rather common that guards acted like messengers between the city and the rural hinterland.

*οἱ τριμιταριοί* [204]: ‘[the charge for] the weavers with special equipment’

*SB 7756.7; SB 7756.19*

This charge was levied to pay weavers with special equipment. The Latin term for *τριμιτάριος* is *triliciarius*, and the words are, respectively derived from *τρίμιτος* (‘having three threads in the warp’) and *trilix* (‘a garment of drill or ticking’: sorts of textile).<sup>349</sup> The term therefore would have denoted a producer of such garments.

*τὸ χρυσάργυρον* [204]: ‘the chrysargyron’

*P. Oxy.* 3415.7; *P. Oxy.* 3480.10

The *chrysargyron* was the tax on trades established by Constantine to provide the army with *donativa*.<sup>350</sup> It was levied from ‘alle Handeltreibenden’, not only including

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called ‘Copreas’, although it is also possible that Copreus and Copreas are two different persons.

<sup>349</sup> Bell, ‘A Byzantine tax-receipt’, 109 (*op. cit.* n. 199).

<sup>350</sup> Karayannopoulos, *Das Finanzwesen des frühbyzantinischen Staates*, 136 (*op. cit.* n. 72); cf. O. Seeck, ‘Collatio lustralis’, *Pauly’s Realencyclopädie der classischen Altertumswissenschaft* IV.1 (1900) 374-375. The tax was abolished by Anastasius in 488: T. Nöldeke, ‘Die Aufhebung des Chrysargyron durch Anastasius’, *Byzantinische Zeitschrift* 13 (1904) 135.



merchants but also ‘alle, die irgend ein Gewerbe ausübten, auch die freien kleinen Handwerker, aber auch die Kuppler und die Dirnen.’<sup>351</sup> The tax is attested in the documents under different names of the tax; and it could be paid in silver or/and in gold (e.g. ‘lustralis auri argentine collatio’<sup>352</sup>). Adam Bülow-Jacobson, the editor of *P. Oxy.* 3480, has translated χρυσάργυρον πραγματευτικόν as ‘the trade tax in gold and silver’.<sup>353</sup>

For a long time, it has been supposed that payments were collected every fourth year.<sup>354</sup> However, Roger Bagnall has showed that the *chrysargyron* was paid in annual instalments in a recent publication.<sup>355</sup> The *chrysargyron* was the only tax collected on a regular basis that was not levied on landed property. We are ignorant about the exact weight of the tax, but - as with the tax on wool/sheep above - the heaviest burden was borne by the strongest shoulders, although the strongest shoulders were often exempted to pay. (A law, initiated by Honorius and Theodosius II in 410, abolished the possibility of exemption from the *chrysargyron*.<sup>356</sup>)

The amount due in *P. Oxy.* 3415 was the not inconsiderable sum of twenty solidi. Unfortunately, we do not know how

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<sup>351</sup> Karayannopoulos, *Das Finanzwesen des frühbyzantinischen Staates*, 130 (op. cit. n. 72).

<sup>352</sup> *Codex Theodosianus*, I.5.14 (405).

<sup>353</sup> *P. Oxy.* 3480, l. 10.

<sup>354</sup> P. van Minnen, ‘Chrysargyron account’, in: Hoogendijk and Van Minnen (edd.), *Papyri, ostraca, parchments and waxes tablets*, 233 (= *P. L. Bat.* XXV 65; op. cit. n. 285); R. Delmaire, ‘Remarques sur le chrysargyre et sa périodicité’, *Revue numismatique Série 6* 27 (1985) 120-129.

<sup>355</sup> R.S. Bagnall, ‘The periodicity and collection of the chrysargyron’, *Tyche: Beiträge zur alten Geschichte, Papyrologie und Epigraphik* 7 (1992) 15-17.

<sup>356</sup> *Codex Theodosianus*, XIII.1.20 (410).

much people were liable in this case to give an indication of the burden of the tax.

τὸ χρυσίον της ἀρουρατίωνος [204]: ‘the gold for the land tax’  
*P. Oxy.* 3397.22

The gold for the land tax was, in my opinion, identical with the *aurum tironicum* (see below). Besides this attestation of the tax in a papyrus from Oxyrhynchus the tax was mentioned in another fourth-century text from Hermopolis. In this latter text the ‘gold for the recruits’ was assessed on the aroura ‘λόγου χρυσου ἀρουρα..ονος’. In short, the *aurum tironicum* was based on landed property.

ὁ χρυσὸς των ἀλιέων [-]: ‘the gold of the fishermen’  
*P. Oxy.* 3423.7-8

The gold of the fishermen was probably a trade tax closely related to the *chrysargyron*<sup>357</sup> (as undoubtedly was the case with ‘the gold of *charybdis*’, *infra*). As far as I know, ὁ χρυσὸς των ἀλιέων has not been attested as a tax before.

ὁ χρυσὸς των βουρδώνων [204]: ‘the gold for the mules’  
*P. Oxy.* 3420.45-46; *P. Oxy.* 3424.8

The gold for the mules was a military tax levied on land. The revenue was - probably - spent by the army on the purchase and maintenance of the ‘military mules’. Mules were put to

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<sup>357</sup> H. Chouliara-Raios, *Ἡ ἀλιεία στην Αίγυπτο ὑπὸ τὸ φῶς των Ἑλληνικων παπυρων (Ιωαννίνα: Πανεπιστήμιο Ιωαννίνων, 2003)* 1.276.

use in the Roman army as draught animals and harnessed to wagons of weapons, supplies and catapults (as is shown by the illustrations on Trajan's Column and the Column of Marcus Aurelius in Rome). The χρυσός βουρδώνων was often collected together with other military taxes<sup>358</sup> like the χρυσός πριμιπίλου (in *P. Lips.* 87 and *P. Oxy.* 2001)<sup>359</sup>, the χρυσός των τιρόνων (*P. Oxy.* 1905 and *P. Oxy.* 2001; see below) or the ἐσθής στρατιωκή (*P. Oxy.* 1905; see above).

Although Karayannopulos has claimed that the χρυσός βουρδώνων was a 'prozentuale Zusatzsteuern, zu bezahlen für den Transport der Sachsteuern zu [...] Lande', this view can - in my opinion - not be maintained after considering the available (papyrological) evidence.<sup>360</sup>

ὁ χρυσός των τιρόνων [205]: 'the *aurum tironicum*'; 'the gold for the recruits'

*P. Oxy.* 3401.10; *P. Oxy.* 3424.9

This tax in money was levied when a population could no longer support the demands of conscription for the army - although regions with the best recruits were sometimes taxed, while areas with relatively poor quality material (like

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<sup>358</sup> Gascou and Worp, 'P. Laur. IV 172 et les taxes militaires au 4e siècle', 124 (*op. cit.* n. 266).

<sup>359</sup> For the χρυσός πριμιπίλου, see: J.-M. Carrié, 'Primipilaires et taxe du 'primipilon' à la lumière de la documentation papyrologique', in: J. Bingen and G. Nachtergaele (edd.), *Actes du XV<sup>e</sup> Congrès International de Papyrologie: Bruxelles-Louvain, 29 août - 3 septembre 1977* (Bruxelles: Fondation égyptologique Reine Élisabeth, 1979) IV.156-176.

<sup>360</sup> Karayannopulos, *Das Finanzwesen des frühbyzantinischen Staates*, 124 (*op. cit.* n. 72).

the Suburbicarian diocese<sup>361</sup>) were to send their men as recruits to the army.<sup>362</sup> Mid-fourth century Oxyrhynchus clearly was to contribute to the army in money, and not in men. In *P. Oxy.* 3424 the charge for the recruits is levied in *denarii*, although the government expected gold. As we have seen in the above, the devaluated silver currency should have been converted in *solidi* by the responsible *βοηθοί* or other staff members. (Papnuthis and Dorotheus are not mentioned in the papyrus, but as it was found amongst their papers the text is probably part of the archive.)

ὁ χρυσὸς τῆς χαρύβδewς [-]: ‘the gold of *charybdis*’  
*P. Oxy.* 3423.5-6

The gold of *charybdis* (translated by the editor as: ‘the gold for the pool’) was a trade tax, related to the *chrysargyron*. Most probably it signifies a trade tax on fishing in ‘a pool of rough water associated with a lock’.<sup>363</sup> The ‘gold of *charybdis*’ was not identical with the afore-mentioned ‘gold of the fishermen’, but was undoubtedly closely connected to it.

After this extensive discussion of the taxes mentioned in the archive of Papnuthis and Dorotheus, it is time for some concluding remarks. First of all: some statistics. There is a total of seventy-nine attested taxes in the archive (some taxes in the entries above are included in multiple categories, e.g. the adaerated woad for the account of the catholicus in *P.*

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<sup>361</sup> *Codex Theodosianus* VII.13.3-4 (367).

<sup>362</sup> Jones, *The later Roman Empire, 284-602*, 149 (*op. cit.* n. 7).

<sup>363</sup> Cf. *P. Coll. Youtie* II 68, l. 21-2 n.

*Oxy.* 3428, l. 19 is included in three entries: *ἐξαργυρισμός*, *ισάτις* and *καθολικότης*, and the taxes mentioned twice in *SB* 7756 are only counted once in the total), of which forty-five were paid in money<sup>364</sup>, thirty in kind<sup>365</sup> and four in an unknown way (which are all related to the office of the *catholicus*<sup>366</sup>). Nine taxes that were paid in money had actually to be paid in kind, but were adaerated.

A large majority of the taxes was somehow related to the *annona*. As a category on itself, the *annona* is by far the most important category of taxation in our archive (14 attestations, excluding *P. Oxy.* 3420, l. 15 and *P. Oxy.* 3420, l. 16-19, which are both commuted payments; and *P. Oxy.* 3393, l. 8: ‘the public dues’). But, besides the items that belonged to the *annona* in the restricted sense, another thirty-one attested taxes can be interpreted as having belonged to the *annona*. The *anabolikon* and the collection of wool, linen and flax were all taxes in kind intended for the *annona militaris*, but there were also taxes in favour of the army that were levied in money: the *vestis militaris*, the charge for the

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<sup>364</sup> Including: ‘the money for India’ (2); ‘impurities and storage fees’ (2); ‘the canal of Alexandria’ (1); ‘adaerated taxes’ (9); ‘*vestis militaris*’ (2); ‘the charge for Constantinople’ (2); ‘shipping costs’ (5); ‘occasional charges’ (2); ‘the charge on [unspecified item of] first quality’ (2); ‘additional demand’ (1); ‘porterage costs’ (1); ‘payments’ (6); ‘the charge for the weavers’ (1); ‘the *chrysargyron*’ (2); ‘the gold for the land tax’ (1); ‘the gold for the fishermen’ (1); ‘the gold for the mules’ (2); ‘the gold for the recruits’ (2); and ‘the gold for *charybdis*’ (1). Total of 45 taxes levied in money.

<sup>365</sup> Including: ‘the *anabolikon*’ (2); ‘the items for the *annona*’ (14); ‘the public dues’ (1); ‘wool’ (1); ‘wax’ (2); ‘the *cumuli*’ (1); and ‘linen/flax’ (9). Total of 30 taxes levied in kind.

<sup>366</sup> *P. Oxy.* 3408, l. 27; *P. Oxy.* 3410, l. 8-9; *P. Oxy.* 3423, l. 18-20; *P. Oslo* 88, l. 25.

τριμιταρίοι, the gold for the land tax, the gold for the mules, the gold for the recruits and possibly the *πρωτίον* too.

Other levies were destined for the governmental administration. These included the collection of wax and the items due to (the office of) the *catholicus* - of which the exact contents are unknown to us in most cases. In the cases where the contents are specified, the levies are in tow, wool and woad (of which the last two were commuted in payments of money). The grain that was levied as *τα δημόσια* and the *κούμουλα* was probably added to the total amount of grain destined for the army and for the food supply of the large cities and were to be distributed to the *plebs frumentaria*. At last, all instances of *adaeratio* in the archive were originally also intended for the *annona*.

When we quantify this information, two-thirds of all attested taxes in the archive of Papnuthis and Dorotheus were directly related to the *annona*, or - in terms of percentage - 67.09% of the total.<sup>367</sup> The twenty-six taxes that were not related to the *annona* (though it is not impossible that some of these taxes somehow were related to the *annona* too) were all paid for in money. That is to say that all taxes levied in kind were destined for the *annona*.<sup>368</sup>

Of the twenty-six remaining attestations, we know in twenty cases why the tax was collected: in six cases we only

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<sup>367</sup> Including: 'the *anabolikon*' (2); 'the items for the *annona*' (14); 'the public dues' (1); 'adaerated taxes' (9); 'wool' (1); '*vestis militaris*' (2); 'wax' (2); 'the amounts due to the *catholicus*' (4); 'the *cumuli*' (1); 'linen/flax' (9); 'the *proteion*' (2); 'the charge for the weavers' (1); 'the gold for the land tax' (1); 'the gold for the mules' (2); and 'the gold for the recruits' (2). Total of 51 items related to the *annona*.

<sup>368</sup> Cf. Cérati, *Caractère annonaire et assiette de l'impôt foncier au Bas-Empire*, 181 (*op. cit.* n. 186).

know that a sum of money was sent from the countryside to the city of Oxyrhynchus (headed under τὸ τέλεσμα in the inventory above). Of these twenty remaining taxes an overwhelming majority was concerned with transport costs and all sorts of trade: nine taxes were concerned with the costs of transport and infrastructural maintenance<sup>369</sup>, eight were concerned with trade<sup>370</sup> and the remaining three taxes were so-called superindictions<sup>371</sup>.

In the above, I have left the option open that some of the taxes that were not directly concerned with the *annona* were all the same related to it in an indirect manner. And when we consider these levies on transport and trade, it is very likely that some of these taxes were also somehow involved with the *annona*. After all, the items of the *annona* had to be transported to their destinations (probably via the stopover site of Alexandria to Constantinople). And have we not seen that the most important tax on trades, the *chrysargyron*, was established by Constantine to provide the army with donatives?<sup>372</sup> A very large majority of the taxes in the inventory above was - directly or indirectly - related to the provisioning of the army, to the provincial and imperial administration, and to the major cities of the Roman Empire. Hence, the most important conclusion to be drawn from this

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<sup>369</sup> Including: 'impurities and storage fees' (2); 'the canal of Alexandria' (1); 'portage costs' (1); and 'shipping costs' (5). Total of 9 taxes related to transport and infrastructural maintenance.

<sup>370</sup> Including: 'the money for India' (2); 'the charge for Constantinople' (2); 'the *chrysargyron*' (2); 'the gold of the fishermen' (1); and 'the gold of *charybdis*' (1). Total of 8 taxes related to trade.

<sup>371</sup> Including: 'the occasional charges' (2); and 'the additional demand' (1).

<sup>372</sup> *Supra*, p. 87.

discussion appears to be that the late antique fiscal system was almost solely concerned with the *annona*.

However, a corpus of twenty-five texts from one particular place and written within a relatively short period of time is too little to come up with a far-reaching conclusion like this. Therefore, I will briefly discuss the fiscal landscape of Karanis, a village in the Fayum, between 340 and 380 on the basis of papyrological evidence in the next paragraph. How omnipresent was the *annona* in the taxation system of Karanis? What were the similarities between Oxyrhynchus and Karanis, and - perhaps, more interesting - were there important differences between the two places?

### 3.5 *Comparison: the fiscal landscape of Karanis*

Karanis was an agricultural village in the fifth *pagus* of the Arsinoite nome on the north-eastern border of the Fayum Oasis, located about 110 kilometres as the crow flies north of Oxyrhynchus. The village was established in the third century BC by Ptolemy II Philadelphus. It had its peak in the Roman era, when the village occupied ca. eighty hectares<sup>373</sup>, but the decline set in from the mid-fourth century onwards. At that time, Karanis was the centre of an administrative district called ‘the village of Karanis and its *horiodiktia*’.<sup>374</sup> It

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<sup>373</sup> E.M. Husselman, *Karanis excavations of the University of Michigan in Egypt 1928-1935. Topography and architecture: a summary of the reports of the director, Enoch E. Peterson* (Ann Arbor: University of Michigan Press, 1979) 7.

<sup>374</sup> Bagnall, ‘Agricultural productivity and taxation in later Roman Egypt’, 290-291 (*op. cit.* n. 91); the *horiodiktia* included adjacent villages dependent of Karanis, like Hiera, Ptolemais, Kalos, Kerkesoucha en Kainos.



appears that taxes for Karanis and its dependent villages were therefore collected together.

A substantial number of papyri excavated in Karanis are dating from the reign of Diocletian to the 370s and are in particular concerned with the tax-collection. It has been determined that Karanis was a relatively poor village mainly inhabited by self-sufficient farmers without much contact with other places.<sup>375</sup> We have to take into account that Karanis was no metropolis, like Oxyrhynchus, but just a sizeable village in the countryside: the villages appearing in the Oxyrhynchite countryside in the archive of Papnuthis and Dorotheus also seem rather isolated, though they were in almost permanent contact with the nome capital.

For comparing the fiscal situation of Oxyrhynchus with the system of taxation in Karanis, I have examined forty-one texts from Karanis of which the bulk can be dated between 335 and 360.<sup>376</sup> Although these texts do not seem to form a (single) archive like that of our Oxyrhynchite case-study, the documents from Karanis contain a number of recurring names (the complex family relations in the Karanis archives are described in the introduction of *P. Col. VII*, which also includes a useful and carefully drafted stemma<sup>377</sup>).

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<sup>375</sup> R. Alston, *Soldier and society in Roman Egypt: a social history* (London: Routledge, 1995) 122.

<sup>376</sup> *P. Col. VII* 126, 127, 129-131, 160, 166, 172, 174, 181; *P. Mich.* VI 399-415; *P. Mich.* XII 651; *P. NYU I* 4, 5-11a, 13, 14; *SB XX* 14380; and *SB XXII* 15845.

<sup>377</sup> R.S. Bagnall and N. Lewis, *Columbia papyri VII: fourth century documents from Karanis* (Missoula [MT]: Scholars Press, 1979) 4-9; earlier prosopographical comments on the family relationships can be found in: N. Lewis, *Greek papyri in the collection of New York University I: fourth century documents from Karanis* (Leiden: Brill, 1967) ix; idem, 'Further

The texts discussed in this paragraph are mainly centred around Aion, son of Sarapion, and Valerius, son of Antiourios, who were most probably half-brothers (logically sharing the same mother).<sup>378</sup> Other prominent figures in the texts are Aion's full brother Heras, and his cousins Venaphris and Nilammon, sons of Ptollas. All these men were part of the same generation and belonged to the upper class of village society: e.g. Aion was probably head of a *pittakion*, 'a consortium of agricultural work' in which (agricultural, but possibly also small-scale industrial) work and taxpaying were done in conjunction with family-members. (These cooperating extended family households were rather common in Egyptian villages.<sup>379</sup>) Besides, Aion, Valerius, Venaphris and Nilammon also frequently figure in the texts as conveyors of the collected tax-grain from the village granaries to the local harbour (a liturgy imposed on the village landholders<sup>380</sup>). There, they delivered the grain to the

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thoughts on the Aurelia Tetouis papers', *The American Journal of Philology* 83 (1962) 186; idem, 'A centurion's will linking two of the fourth-century Karanis Archives', in: E. Kießling and H.-A. Rupprecht (edd.), *Akten des XIII. Internationalen Papyrologenkongresses, Marburg/Lahn, 2.-6. Aug. 1971* (Munich: C.H. Beck Verlag, 1974) 225-226. Also interesting in this respect is *P. NYU II 23* (=B. Nielsen and K.A. Worp, 'New papyri from the New York University collection: III', *Zeitschrift für Papyrologie und Epigraphik* 140 (2002) 129-131), originally edited by Lionel Casson in his unpublished dissertation as text #4: cf. B. Nielsen and K.A. Worp, 'New papyri from the New York University collection: I', *Zeitschrift für Papyrologie und Epigraphik* 133 (2000) 164.

<sup>378</sup> Bagnall, *Columbia papyri VII*, 8 (*op. cit.* n. 377).

<sup>379</sup> Bagnall, *Egypt in Late Antiquity*, 118 (*op. cit.* n. 62).

<sup>380</sup> Lewis, *Greek papyri in the collection of New York University*, 10 (*op. cit.* n. 377).

ὕποδέκται (*susceptores*<sup>381</sup>) of the village of Karanis, who accordingly issued a receipt.

A majority of the examined documents (twenty-eight of them) is formed by such receipts and, therefore, almost solely concerned with τὰ ἀννωνικά εἶδη. A total of one hundred and fifteen collected taxes in kind can be attested in these receipts: twenty in barley, eighty-five in wheat, six taxes were paid in meat and four taxes were paid in chaff.

The other documents contain taxes in money, although in four of these texts the payments are no further specified (*P. NYU* 13 and 14; *P. Col.* 126 and 131). In two cases the money is levied for clothing (ἔσθητος), and we may assume that these payments were thus destined for the *vestis militaris*.<sup>382</sup> The other military taxes known from Oxyrhynchus are almost completely absent from these Karanis texts: the only attested tax on linen - which was in Oxyrhynchus levied for the *anabolikon* - is most probably a commuted tax.<sup>383</sup> A few other taxes in the Karanis documents are also adaerated: the size of the amounts in *P. Mich.* XII 651 implies that the commutation of the general land tax is meant here; in *P. Col.* VII 127 we find taxes on wine and meat (since meat is also collected in kind, this tax is possibly commuted; the charge on wine - otherwise unknown from these documents - can also be

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<sup>381</sup> *Susceptores* were municipal officials drawn from the bouletic class: F. Oertel, *Die Liturgie: Studien zur ptolemäischen und kaiserlichen Verwaltung Aegyptens* (Leipzig: Teubner, 1917) 222-225. Cf. C. Lepelley, 'Quot curiales, tot tyranni. L'image du décurion oppresseur au Bas-Empire', 144 (*op. cit.* n. 142): 'La perception directe, à la source, était confiée aux *susceptores*, recrutés parmi des décurions encore jeune et peu avancés dans leur carrière.'

<sup>382</sup> *P. NYU* 4, l. 8-9; *P. Col.* 129.

<sup>383</sup> *P. NYU* 11a, l. 56.

explained by the fact that wine in the vicinity of Karanis was of inferior quality and the government therefore opted to collect the tax on wine in money to buy better-quality wine in other areas).

The costs for transport frequently appearing in the documents from Oxyrhynchus are also mentioned in *P. Mich.* 399-415, excluding no. 412. However, it is in these texts stated that the shipping charge is *not* paid.<sup>384</sup> Since all these texts follow the same pattern, it would suffice to illustrate this by citing one example, *P. Mich.* 399: 'Payni 25, grain for the sixth indiction for the village of Karanis, Venaphris, son of Ptollas, including the twentieth (σὺν εἰκοστῇ), three and one-twelfth artabas, 3 <sup>1</sup>/<sub>12</sub> art., excluding the shipping charge (χωρὶς ναυλεπλοίου).' In *P. Col.* 130 the charge is paid and is called the *ναῦλον θαλασσίων πλοίων*: the charge for the costs of transporting (grain) by sea - probably from Alexandria to Constantinople (or another major city).

The last tax appearing in the documents from Karanis that needs to be mentioned here, does not figure in the archive of Papnuthis and Dorotheus. *P. Col.* 166, probably to be dated in 345/346, is a receipt from dike work issued to Heras, son of Sarapion, for two *naubia* (a cubic measure of earth which one was responsible for moving) for the cleaning of the dikes.<sup>385</sup> The appearance of this tax here can be explained by the fact that the Arsinoite nome was situated at some distance from

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<sup>384</sup> The term for the shipping charge used in the texts (*ναυλεπλοῖον*), is probably correctly called a ghost word by P.J. Sijpesteijn, 'Ναυλεπλοῖον: a ghost word?', *Zeitschrift für Papyrologie und Epigraphik* 64 (1986) 117-118.

<sup>385</sup> Wallace, *Taxation in Egypt from Augustus to Diocletian*, 59-61 (*op. cit.* n. 99).

the Nile and was not reached by its flood.<sup>386</sup> A complex system of irrigation by canals was therefore necessary to supply the fields and the canals and dikes were maintained by *corvée* labour - as for example appears from the above-mentioned text.<sup>387</sup>

As in the Oxyrhynchite case, the *annona* was the most important category of taxation in Karanis: wheat and barley are by far the most frequently attested levies in the documents. However, we have also seen that familiar taxes like the *vestis militaris* and the costs of transportation were levied at Karanis, although this last category is better known because it is said in the papyri that this charge was not included - this implies that the costs of transportation still had to be included somewhere during the collection. One category of taxation appears to be wholly absent in Karanis: the taxes on trade, which are attested eight times in the archive of Papnuthis and Dorotheus. But this should be no surprise, since the volume of trade in the village of Karanis would have been much smaller than in a nome capital like Oxyrhynchus. On the other hand, since Karanis was situated near the shores of Lake Moeris, one might have expected that some taxes relating to fishing - like the *χρυσός των ἀλιείων* in Oxyrhynchus - would be attested in the documents.

Taking into account the different administrative levels that Karanis and Oxyrhynchus represent (the former a countryside village; the latter a nome capital), the fiscal

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<sup>386</sup> However, this *corvée* labour is also attested in the Oxyrhynchite nome: M. Peachin, 'Dike work in the Oxyrhynchite nome', *The Bulletin of the American Society of Papyrologists* 19 (1982) 159-166.

<sup>387</sup> Bagnall, *Egypt in Late Antiquity*, 17 (*op. cit.* n. 62).

landscape of both locations was to a considerable degree identical. In both cases the items collected on behalf of the *annona* were by far the most important categories of taxation and the *annona* would have been the most burdensome levy for all inhabitants of later Roman Egypt - and for each inhabitant of the later Roman Empire as a whole. The vast majority of the *annona*-levy was paid for in kind, though it was possible to commute these taxes into payments of money. This was most often applied when the arrears of earlier indictions were collected.

However, not all *annona*-related charges were paid in kind: some levies for the *annona militaris* were levied in money. The most important of these monetary military taxes was in fact a 'pseudo-money' tax: the *vestis militaris* was paid for in money, but converted into clothing soon after the collection. The weavers of the military clothes were paid with the money that was collected from the peasants.

This mechanism of conversion is attested in case of other money taxes as well, which were not afterwards converted into goods. In this cases, the government expected payments in gold (judged by the used terminology: 'the *gold* for the land tax', 'the *gold* for the fishermen', 'the *gold* for the mules', etc.), even if the government knew that most inhabitants of the empire were unable to meet these fiscal demands in *solidi*. However, we have seen in the above that these taxes were not collected in *solidi*, but in myriads of *denarii* instead. After the collection, the revenue was exchanged into golden coins on the local market against the most favourable available rate.

Although the peasant could not contribute to the treasury in high denominations, it would be wrong to assume that the

countryside was demonetized.<sup>388</sup> After all, various taxes had to be paid in money. How did these peasants get hold of that money? Unfortunately, we are not informed on the possible solution to this problem by the papyri, but the only solution I can think of is closely related to the thesis of Hopkins: by trade. As long as a part of the taxes was levied in money, trade would have continued on a considerable scale in the empire.

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<sup>388</sup> Although he does not discuss taxation, but rents, a diametrically opposed - and in my view: incorrect - view to the economic situation of the later Roman countryside can be found in: D. Vera, 'Forme e funzioni della rendita fondiaria nella tardo antichità', in: A. Giardina (ed.), *Società romana e impero tardoantico I: Istituzioni, ceti, economie* (Bari: Laterza, 1986) 367-447.

## ∞ IV ∞

# Summarizing and concluding remarks

On 21 December 2007 press agency Reuters brought the following news to the world: ‘Venezuelan President Hugo Chavez offered Caribbean and Central American nations the option on Friday to pay for already cheap oil supplies with local products, such as bananas and sugar.’<sup>389</sup> In our (post-) monetized world, in which we frequently use plastic money (e.g. credit cards) and even invisible money (online banking services), this is odd news. It is difficult for us to imagine a natural economy which is fully integrated in our modern world economy. However, less advanced-economies in various parts of the world still use shells as a medium of exchange instead of money. In other countries the relation between ancient economic practice and modern economy is revealed in other ways: for example, in Chinese, the character for money is identical with the character for shell or cowry.

The central question in this thesis was also concerned with this issue of the nature of economy. However, the period under review was not the modern world, but Late Antiquity: what can we say about the character of the (late) antique economy? This question has been asked by many scholars

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<sup>389</sup> A. Boadle, ‘Chavez extends oil largesse at Caribbean summit’ (*Reuters*; 21 December 2007).



over the last one hundred and fifty years, but it did not come to an agreement on the characterization of the ancient economy in general. This resulted in the famous controversy between Bücher and Meyer, which is also known by the name of ‘primitivists *versus* modernists’-debate. Anyway, the economy of the early Roman Empire was undoubtedly monetized as has, for example, been ingeniously demonstrated by Keith Hopkins (*supra*, p. 28-29).

However, the characterization of the late antique economy was a rather different story: influenced by the enormous monetary depreciation in the third century, a relapse took place to an economy in which transactions in kind prevailed. At least, that was the *communis opinio* until the 1930s. Modern scholars describe the economy of the later Roman Empire as ‘a mixed economy’, where transactions in kind and transactions in money took place simultaneously. In this thesis I have examined to what extent this ‘mixed’ character is reflected in the later Roman system of taxation.

I consider the later Roman system of taxation as a porthole to the late antique economy in general, but - at the same time - I am aware of the fact that this subject is still too big for an exhaustive account. Therefore, I have adopted a multidimensional methodological approach with different methodological levels: a meta-historical level, a macro-historical level and a micro-historical level.

The introductory chapter was solely concerned with the debate on the nature of the (late) antique economy: the meta-historical approach. In a chronological account, starting with the publication of the first part of Gibbon’s *magnum opus* in 1776, I have described the debate which was

in fact already announced in the subtitle of the present work: 'a study on the character of the late antique economy'.

The later Roman system of taxation (with special emphasis on Egypt) was the central subject of chapter two: the macro-historical approach. Although no one has succeeded in writing a satisfying monograph on the late antique tax-system until the present moment and there is still no consensus on many major and still more minor points, it is possible to say 'something' on the system. However, conclusions on the later Roman economy or late antique fiscality are only valuable if they can be compared with results from a different period. After all, the omnipresent question underlying this thesis is: how different was the economic situation in Late Antiquity from the situation in the Principate? Therefore, I have discussed the pre-Diocletianic system of taxation in § 3.1.

The main character of this system was diversity: taxes were collected by a wide range of land-, poll- and trade-taxes, which were often levied in different ways in different areas of the empire. In some provinces the most important fiscal charge, the *tributum soli* (land-tax), was collected in kind, in other parts the land-tax was paid in money. In Egypt, the land-tax was assessed in kind and in money: grain-land was assessed in kind (the average rate for private land - 1 to 1.5 *artabas* per *aroura* - was considerably lower than the average rate for public land: ca. 4-4.5 *artabas* per *aroura*), but taxes on vine-land and orchards were collected in money. Poll-taxes and trade-taxes were both collected in money, but accounted only for approximately a third of the total tax-revenue. Hence, an overwhelming majority the tax-yield was collected on land.

Another characteristic of the fiscal structure during the Principate was inelasticity: rates fixed under the first emperors were never altered. The rates could be kept low because of the relative prosperity of the empire during the Principate, but when the government had to meet extra demands more frequently from the third century onwards, the government chose to debase the coinage instead of raising the general rate of taxation. This would turn out to have been a decision with far-reaching consequences, since the (economic) crisis of the third century would probably have been less severe if the emperors had raised the rate of taxation. Now - also under influence of the nearly constant civil war and the invading 'barbarians' - the currency collapsed during a period of hyperinflation.

When Diocletian ascended to the throne in 284, he inherited an empire that was slowly recovering from one of the most severe crises in its history. He put the empire back on the rails by administrative, military and fiscal/monetary reforms. His most important fiscal reform was the introduction of a new procedure to calculate the burden of taxation: *capitatio-iugatio*. This system was based on two fictive units of assessment: the *iugum* (land tax-unit) and *caput* (personal tax-unit), which could be added together to form the total assessment of an estate, but in some parts of the empire - like in Egypt - taxes were only assessed in *iuga*. As a result of this new procedure, the tax burden could be assessed in a comparatively uniform way because differences in the quality of land were taken into account by the new system: a passage from the Syro-Roman Lawbook demonstrates that 60 *iugera* of the worst quality of land was

identical to 20 *iugera* of first-quality land. Both plots counted as one *iugum*.

However, this new system of taxation in which fictitious parameters were used for the calculation of the tax potential of land, people, and animals, was only applied to those in the possession of land. Even though agriculture was the foundation of the Egyptian economy, the burden of taxation was unevenly divided between city and countryside. That part of the urban population without any land was in general very lightly taxed. The only regular tax levied upon urban population appears to have been the trade-tax, the *χρυσάργυρον*, which was paid by every category of traders.

For a long time it was taken for granted that the collapse of the currency in the third century caused a relapse to transactions in kind, and since the burden of taxation principally fell on the land in the later Roman Empire it might be expected that most taxes were levied in kind. Fortunately, such an assumption can be tested by investigating papyri concerned with the tax-collection in the later Roman Empire.

The micro-historical approach adopted in the third chapter of this thesis was centred on a cluster of texts from fourth-century Oxyrhynchus: the archive of the brothers Papnuthis and Dorotheus. Papnuthis and Dorotheus served as assistants to various *praepositi pagi* in the Oxyrhynchus nome. The predominant part of their function was concerned with the collection of taxes, both in money and in kind. The brothers really worked as a team: one was (permanently) present in the city to meet officials, while the other brother resided somewhere in the countryside to

collect the taxes that were paid by the rural population to the comarch, the highest ranking village official.

How did these peasants fulfil their fiscal obligations: exclusively in kind or perhaps also in money? Overseeing all the taxes mentioned in the archive of Papnuthis and Dorotheus (§ 3.4), the rural population evidently contributed to the treasury in kind and in money. Unfortunately, the information in the archive cannot be used for the reconstruction of a general overview of fiscal burdens (since the population of the Oxyrhynchite countryside was probably liable to more taxes than mentioned in the archive), but without any doubt it can be said that the various items collected for the *annona*, the tax in kind that provided the army, the officials in the service of the imperial and provincial administration (increasingly paid kind in Late Antiquity) and the major cities of the empire, was by far the most burdensome part of the tax-collection.

When the information in the archive is quantified in an absolute sense, two-thirds of all attested taxes were directly related to the *annona*. The twenty-six taxes that were not obviously related to the *annona* were all paid for in money. That is to say that all taxes levied in kind were destined for the *annona*. Of the remaining twenty-six attestations nine charges were concerned with the costs of transport and infrastructural maintenance and eight were concerned with trade. It is highly probable that some of these taxes were also involved with the *annona* somehow. After all, the items of the *annona* had to be transported to their destinations and the most important trade-tax, the *chrysargyron*, was established by Constantine to provide the army with *donativa*. Hence, the late antique fiscal system was almost solely concerned with

the *annona*, as has also been demonstrated by the case of comparison: fourth-century Karanis (§ 3.5).

The rural population thus paid taxes in kind and in money. Though, to judge by the terminology used by the government, the rural population was unable to pay the money-taxes in the denomination that was expected by the government: the *gold* for the recruits, the *gold* for the mules, etc. The peasants probably paid their charges in small change, which was subsequently used by the collectors to purchase *solidi* that had to be turned over to the government. Papnuthis and Dorotheus thus exchanged the revenue collected in base metal coinage on the local market into *solidi* against the most favourable rate available (as illustrated by *P. Oxy.* 3401).

In the end there are, in my opinion, no decisive indications that the economy of the later Roman Empire was less sophisticated than the economy of the Principate. Both economies were mixed economies, where monetary transactions and transactions in kind persisted side by side. It appears, however, that in the later Roman Empire the fiscal burden was less equitably divided between the cities and the countryside to the detriment of the rural population.

I am perfectly aware of the fact that it is dangerous to say something on the character of the late antique economy in general on the basis of less than one hundred papyri, but the archive of Papnuthis and Dorotheus and the texts from Karanis have illustrated that - despite the fact that the late antique system of taxation was predominantly annonarian - the rural population in fourth-century Egypt did not only paid their taxes in kind, but fulfilled their fiscal obligations in money too.

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