



**HAL**  
open science

# Autopsy of a Crisis: Wealth, Protogenes and the City of Olbia in c. 200 BC

Christel Müller

► **To cite this version:**

Christel Müller. Autopsy of a Crisis: Wealth, Protogenes and the City of Olbia in c. 200 BC. Z. H. Archibald; J. K. Davies; V. Gabrielsen. *The Economies of Hellenistic Societies. Third to First Centuries BC*, Oxford University Press, pp.324-344, inPress, 9780199587926. hal-01681297

**HAL Id: hal-01681297**

**<https://hal.parisnanterre.fr/hal-01681297v1>**

Submitted on 11 Jan 2018

**HAL** is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

L'archive ouverte pluridisciplinaire **HAL**, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d'enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.

# Autopsy of a Crisis: Wealth, Protogenes, and the City of Olbia in c.200 BC

CHRISTEL MÜLLER

If we follow M. Rostovtzeff, alone in having dared to write a complete social and economic history of the Hellenistic period, the Greek and Greek-speaking world encountered, from the Classical to the Imperial era, two major crises: one in the fourth century, that was ended by Alexander's conquest, the other in the late Hellenistic period, mostly in the first century BC. Thus the third century fell, according to him, between these two crises and was a time of stability and prosperity, which saw the success of the business classes (the *bourgeoisie*) and a certain kind of capitalism. Of course these bourgeois behaved as *rentiers*, which at least would help to explain among other things the social crises of the second half of the century. But more generally after a period of disruption in the balance between supply and demand in the fourth century, and the troubles brought by the Romans in the second century BC, the third century was a time of business and global enrichment. However, such a reconstruction does not take much account of the inscriptions of the early Hellenistic period which, from mainland Greece to Asia Minor, indicate the difficulties of the cities, especially in terms of finance and what these inscriptions refer to as the lack of liquidity, *aporía tōn chrēmātōn*. The Black Sea and Olbia also figure among such examples, as the well-known decree in honour of the benefactor Protogenes demonstrates.<sup>1</sup> It is this decree that will serve as a starting point for my investigation.

Today, almost seventy years after the publication of the monumental *SEHHW*, the idea of crisis is not enjoying much success in studies of ancient history, because it has too often been associated with 'decline'. L. Robert and his successors have shown all too clearly that decline has been unfairly considered to be a characteristic feature of the post-Classical city: the 'Greek

<sup>1</sup> *IOSPE I*<sup>2</sup>, 32 (*SIG*<sup>3</sup> 495): Side B only in Maier 1959: no. 82; excerpts in *Emprunt* no. 44. English translation and brief commentary, Austin<sup>2</sup> no. 115. I present the text, a bibliographic lemma and a full translation in Müller 2010*b*: DE 21.

city did not die at Chaeronea'.<sup>2</sup> In addition to the problem of 'crisis', euergetism can appear to be a subject that has been fully understood thanks to the major studies of P. Veyne<sup>3</sup> and Ph. Gauthier.<sup>4</sup> But this is not the case, as L. Migeotte has shown in a recent international epigraphy conference:<sup>5</sup> the economic aspects of euergetism still await exploration and, above all, quantification. Of course royal benefactors have been the subject of various studies and syntheses,<sup>6</sup> but the economic role of individuals has often been neglected and obscured by the ethics of their action, the term being understood according to the values of the *polis*. More generally, the circulation of money in Greek cities has for a long time been largely a topic discussed by numismatists only, in spite of the recent emphasis on the meaning and semantics of the terms 'money' and 'coinage'. Indeed, apart from R. Bogaert's study of banking,<sup>7</sup> focusing essentially on the institutional aspect of lending money, studies of the circulation of money are relatively recent<sup>8</sup> and concern above all Classical Athens, where the methods of credit provision were first developed. But perhaps further light can be shed on this subject by looking more closely at situations where money was in short supply, or in other words periods of lack of liquidity, leaving for now on one side the social aspects related to the abolition of debts.

This chapter therefore has a limited aim: to analyse closely the process at work during a crisis where money and its circulation take a demonstrably dominant place, in a city that was certainly on the periphery but whose language and concerns differ little from other polities of the Aegean world. I develop three questions, which are closely linked: can we, from the language of the inscription, distinguish a pattern that could offer a model of a crisis? What are the mechanisms of a financial crisis? Finally, what are the possible reasons for such a crisis? While these questions are addressed in the examination of one particular case study, parallel examples can be introduced to shed light on the similarities of the problems seen elsewhere in the Hellenistic world.

## COUNTING PROTOGENES' EXPENSES

Any answer to these questions requires first and foremost some precision about Protogenes' expenditure. His expenses cannot be easily reconstructed, even though the honorific decree has only a few textual uncertainties.

<sup>2</sup> On this well-trodden theme, see Robert 2007: 603. <sup>3</sup> Veyne 1976.

<sup>4</sup> Gauthier 1985. <sup>5</sup> Migeotte 1997.

<sup>6</sup> C.f. e.g. Bringmann and von Steuben 1995 and Bringmann 2001.

<sup>7</sup> Bogaert 1968 (see Abbreviations).

<sup>8</sup> e.g. Cohen 1992, Shipton 2000, Bresson 2005, Gabrielsen 2005, and more recently Chankowski 2008 and Cohen 2008.

Although some passages of the decree that touch on the financial procedures have already been dealt with in some detail by Migeotte,<sup>9</sup> it seems to me that some of his conclusions need further refinement.

The decree honouring Protogenes can be dated to about 200 BC. Different precise dates have been offered, ranging from the 220s to the 180s, on the basis of different criteria (letter forms, prosopography, identification of the 'barbarians' of the text with one or other *ethnos* etc.). I doubt that one can be as precise here as Ju. G. Vinogradov<sup>10</sup> (220–210 BC) or his homonym Ju. A. Vinogradov<sup>11</sup> (who prefers a date before 213 on the basis of the collapse of the Celtic state in Thrace, or even before 216 following the appearance of the Bastarnai in the Danube region). Anyway, this lengthy decree is a sort of 'summary of his career' for an individual who has demonstrated euergetism 'throughout his life' (A 7, *διὰ βίου*). It refers to successive events, classified here, as so often in this type of inscription, at the same time by chronological layers but also by major areas of activity. In this way the decree recalls similar examples of the late Hellenistic period<sup>12</sup> and even the Roman Imperial era, without the same rhetorical abundance. At best one might say that the actions of Protogenes belong to the last quarter of the third century.

Another preliminary comment is essential. The benefactor has performed these benefactions through private generosity without any other pressure than his wish to act for the public good. But he has also acted as a magistrate, the terms of which are recalled at the end of the document (B 64–5): for three years he acted as someone 'responsible for the common financial administration and for the treasury' (*ἐπί τε τῆς κοινῆς οἰκονομίας καὶ ταμείας γενόμενος*), which reminds us of the role that Lykourgos held in Athens from 338 to 326 BC. Protogenes has also been a member of the college of Nine (A 38–9), about which we do not know much, and it seems this was the occasion, and not only the year, when he demonstrated once again his generosity (by giving money to fund the local kinglets). Migeotte<sup>13</sup> doubts the coincidence between this role and Protogenes' services when holding this office, but it remains difficult to understand why the decree would mention the charge, whatever its precise duties (finances, foreign affairs?), if there had not been some close relationship between the office and his actions other than the need to date them somehow, something that is not systematically done in the text. In general this text does not always separate public actions, performed by Protogenes acting as a private individual, from those accomplished within the responsibility of an official role. An example is the construction of the

<sup>9</sup> *Emprunt* no. 44. <sup>10</sup> Vinogradov 1989: 177–227.

<sup>11</sup> Vinogradov 1999: 70–5.

<sup>12</sup> For example, another famous decree, even though from another region: the decree of the city of Akraiphia in Boeotia honouring the local benefactor Epaminondas in the first century AD, *IG VII 2711*. Cf. Müller 1995.

<sup>13</sup> *Emprunt* 138 n. 426.

walls (B 33–4 and 39) for which Protogenes himself launched the auction and then completed the works without apparently having been given an official public role in this matter.<sup>14</sup> Another example concerning public works is where Protogenes made repairs at his own cost (200 staters) to the public boats (*dēmosia ploia*, B 51–4) but presented accounts of his expenses: in other words, he acted in an official capacity (but which?) after having handed over the sum of money to the city. The precise institutional capacity of his actions is sometimes unclear, which in itself is an interesting phenomenon.

Protogenes' expenses on behalf of the city take the two usual forms: gifts and loans. The latter are transformed regularly into gifts when reimbursement is not forthcoming. Our difficulty is to distinguish one form from the other correctly and to recognize that a distinction between the two is not always possible. This can be seen in Table 15.1, where the sums concerned are expressed in *chrysoi*, that is in gold staters.<sup>15</sup>

Migeotte arrives at two totals, which seem to me imprecise: 2,600 staters for the gifts and 4,100 for the loans. He counts among the gifts one sum, which should not be included: the 400 staters (A, line 38) promised as payment to the *Saioi*, which certainly counts only as an advance on the 1,500 subsequently loaned. As for the loans, the total sum suggested (4,100 staters) counts only the loans made in cash, but one can also include quite legitimately the sums given as credit for the sale of grain (200 + 895 = 1,095 staters, supplied in grain, i.e. payment in kind). The latter are not to be distinguished from what we might think otherwise as proper loans, because they function in precisely the same way in the eyes of the Olbiopolitans, thanks to a general equivalence between grain and cash which I will return to later.

One can ask questions of course about the sense that one gives to the verbs that evoke the transfers of money. But the text is very clear in its use of these verbs. Where there is a gift, the verb *didōmi* is used or, in the example of the liberation of the sacred vases, *hyperapodidōmi*. When loans are referred to, the text mentions a promise (*epanggellomai*) or an advance (*prothesin poieō*) and virtually systematically the reimbursements made (or not). Among all the examples, only those instances at A 40 and B 64 are not totally explicit since we have no indication of an eventual reimbursement. The drafter of the decree has not however hesitated to use the word *didōmi* in the sense of 'provide' in the case of the loan of money for the purchase of grain (A 69) or for the advance of grain in kind (A 73), which recalls the use of the verb in the Kyrene stele (Bresson, this volume).<sup>16</sup> But in the case of Olbia, the context leaves no doubt as to the nature of these different operations.

<sup>14</sup> As Maier (1959: 269–70) correctly notes.

<sup>15</sup> One stater is the equivalent of 20 silver drachmai, following the Attic standard.

<sup>16</sup> RO 96; Bresson (this volume) p. 79.

**Table 15.1.** Gifts and loans of Protogenes to the city (staters)

Gifts	Loans or credit given for sales of grain
A13: 400 (for the King Saitapharnes)	A29: 200 (grain: 2,000 medimnoi at the price of one stater for 10 medimnoi) Reimbursed within one year without any interest charged
A18: 100 (the liberation of the sacred vases that had been pawned by the city)	<i>(A38: promise of 400 [for the Saioi]; certainly to be included among the 1,500 in the next entry)</i>
A23: 300 (purchase of wine)	A40: 1,500 (for the kinglets); no mention of reimbursement
A58: 300 (embassy)	A68: 1,000 (purchase of grain) of which 300 without interest for one year; reimbursed in bronze at the rate of 1:400 A72: 120 (grain: 500 medimnoi at one <i>chrysous</i> for 4 medimnoi and 1/6) + <i>c.</i> 775 (2,000 medimnoi at one <i>chrysous</i> for 2 medimnoi 7/12) = <i>c.</i> 895, reimbursed at the end of one year without any interest
A88: 900 (for King Saitapharnes)	B32: 1,500 (walls or an earlier payment concerning the kinglets?) <i>(B34: 500 [arrhes for works], without doubt to be included in the next entry)</i> B42: 1,500 (ramparts); reimbursed in bronze at the rate of 1:400
B54: 200 for the repair of public boats	B64: 100 (curtain walls of the ramparts); no reimbursement mentioned B85: 6,000 (total of the private debts that are owed to him and his father according to the decree)
<b>Total:</b> 2,200 staters	<b>Total:</b> 5,195 (minimal total) or 6,695 for the city of which 1,600 (minimum) were not reimbursed at all and 6,000 for the private debtors, which were not reimbursed.

A final point on the debts owed to Protogenes is necessary. It seems to me that one can only interpret the 6,000 staters mentioned at the end of the text (B 85) as the total sum of the private debts that are owed by individual Olbiopolitans to Protogenes and his father on the loans that they have made. This impressive amount may well have been inherited in part by Protogenes from his father. As a matter of fact, the total owed is mentioned in the middle of a passage about individual debts, for which the person who was officially responsible for overseeing this concern was chiefly Protogenes, himself the main creditor.

In total Protogenes and his father before him therefore spent more than 13,000 staters of gold on their fellow citizens, i.e. a total of 260,000 silver

drachmai (more than 43 talents). Of course this operation extended over several years, but if one estimates that period as forty years (i.e. the period over which two generations of benefactors had operated) the expenditure is still well over one talent per year. Protogenes, moreover, is clearly not the only example in this category: a certain Polykritos of Erythrai<sup>17</sup> in the 270s was also capable of making an advance of 6,000 drachmai at once when his city was struck by food shortage. But what is striking in the case of Protogenes is the cumulative nature of the debts that he is owed. To have been capable of paying out such sums of money without his personal financial reserves being so affected that he was progressively no longer able to perform any other financial operations shows clearly that his fortune was considerably superior. Does this mean, as Veyne suggests, that Protogenes' personal fortune was greater than that of his own city?<sup>18</sup>

#### THE OTHER RESOURCES OF THE CITY

As an initial response to this question, one might say that Protogenes was richer than his fellow citizens or rather that he was more generous than they. For others were certainly making loans to the city too and thereby providing resources, but they were also demanding reimbursement without any delay. This type of demand is displayed clearly in the first sale of grain on credit, when Protogenes was the only individual not to have immediately recalled the debts owed (A 30). Ph. Gauthier<sup>19</sup> has pointed out that these subtle references to such payments serve to highlight Protogenes' actions, but mostly demonstrate that the supposed financial weakness of the city might in fact be something of a mirage: without any liquidity, it would have been unable to pay back its benefactors. This argument is not altogether convincing, because we do not know the total of the other debts that were recalled. Moreover, in the second case where there is an issue about the reimbursements (A 77), these in fact are repaid thanks to money provided by Protogenes! For the suppliers of grain are paid straight away from the 1,000 staters supplied by Protogenes for the *sitōnia*. If we were to try and translate this behaviour into economic terms, which might otherwise seem rather anti-social in a structure such as the Greek *polis*, it seems to suggest that the lenders had made an investment: how many loans are we not made aware of, because they were simply repaid under normal conditions and so are not mentioned? Ultimately we only learn about the exceptional examples, in other words those instances that turned out to be cases of euergetism: these definitely represented the moral standard

<sup>17</sup> I refer to the text and its translation in Bielman no. 21.

<sup>18</sup> Veyne 1976: 235. <sup>19</sup> Gauthier 1985: 70–2.

of Greek society, but probably not their economic one. The most extraordinary example of 'anti-euergetic' behaviour in the Hellenistic world is surely that of Nikareta of Thespiai in 223 BC,<sup>20</sup> who had lent large sums of money to the city of Orchomenos and never renounced her claim to the reimbursement of these sums. The inscription that refers to this operation is obviously *not* an honorific decree but is instead a long series of financial documents designed to show to posterity that the city could indeed pay off its debts. At least in this case Nikareta, even though a Boeotian, was a foreigner in Orchomenos.

Another source of liquidity that the city of Olbia was able to access at the end of the third century BC was the property of the gods. The Olbiopolitans had pawned sacred vases, *ta hiera potēria*, as a security for the loans with a foreigner called Polycharmos.<sup>21</sup> In return he had advanced the city 100 staters and was about to take the sacred vessels and turn them into coin, because the city had not been able to pay Polycharmos the cash sum they owed him for the loan.<sup>22</sup> Although the distinction between public and sacred property has been the subject of a complex debate that has still to be resolved, it is possible to conclude that civic magistrates could not commit the wealth of the gods without real constraint. The restoration of the property of the gods is obligatory because it is impossible to harm the gods. It is this point that becomes clear from the documents that L. Migeotte has recently studied.<sup>23</sup> So, during the 260s when the people of Samos took grain from the reserves of Hera in the territory of Anaitis, they pay at what one might call a rock-bottom rate of 5 drachmai and 2 obols per *medimnos*.<sup>24</sup> In the case of Olbia, it is well worth noting that the god (Apollo *Ietros*?)<sup>25</sup> was no more able than the public purse to make cash available, as magistrates were pawning material commodities themselves made of precious metals. One can imagine that these vessels were offerings and that they were in gold, since Polycharmos was ready to take the vases to the moneyer, who would have been able to melt them down and transform them into coins, i.e. golden staters. In this respect, I am not sure that it is legitimate to conclude that the creditor, Polycharmos, 'demanded a kind of forced coinage'.<sup>26</sup> If Polycharmos made such a demand, it must have been legal and also included in the conditions of the loan. In addition, one might suppose that the intrinsic value of the vases was (considerably?) superior to the sum of money that was in fact raised by the loan on the vessels. This amount of money is nevertheless rather inconsequential if we compare it with the sums of

<sup>20</sup> *Emprunt* no. 13. Cf. Müller 2010a.

<sup>21</sup> On Polycharmos, cf. Bogaert 125, who is right to think that he is not a banker in the technical sense of the term.

<sup>22</sup> Howgego 1995: 33–4.

<sup>23</sup> Migeotte 2006: 237.

<sup>24</sup> *IG XII 6*, 172, lines 26–7 (Samos, c.260: see n. 53 below).

<sup>25</sup> On this god, see Vinogradov and Kryzhič'kij 1995: 109–11.

<sup>26</sup> *Emprunt* 137 n. 414.



money that were made as gifts or as euergetic loans or were necessary to meet the eventual needs of the city. There are only two explanations that can meet these facts: either the god is rich but the city does not dare to encroach more on the sacred monies; or the god is not that rich, so that city could not borrow more. The use of the definite article *ta* before *hiera potēria* suggests an *a priori* total figure for the vases that had been put up as security, which would corroborate the second hypothesis.

The last source of revenues mentioned in the text is the product of taxation: it appears in two places in the text (A 41 and 50–1), concerning respectively the returns that can be expected in the future and the farmers of taxes (the *telōnai*), who hold on to the money they owe the State. The precise nature of these taxes (*telē*) is not given, but we know from other documents that they were very varied, but were also an essential component among the city's public revenues.<sup>27</sup> The interest of the Protogenes decree is in fact its demonstration of a system on the brink of collapse: the public purse is empty first and foremost because the tax revenues have not come in, regardless of whether or not this was the fault of the *telōnai*. However the city of Olbia was, in theory, able to exploit resources of real potential: it enjoyed a location on the edge of the Dnepr *liman*, which was capable of providing important harbour dues, and a vast and fertile territory, whose produce could be taxed in normal times on production or the commerce related to production, or both.<sup>28</sup> And the basic idea of guaranteeing one of the loans made by Protogenes on the basis of 'the revenues to come' shows the confidence of the citizens in the system, though the clause seems mostly designed to convince the benefactor. But the obvious economic potential of Olbia does not allow it to avoid the crisis because the problem is largely to be located elsewhere.

## WHAT MODEL FOR THIS CRISIS?

The crucial question is the interpretation of this crisis and of the precise identification of its components. The first difficulty however is to know whether this term, 'crisis', is a legitimate one. Some historians such as Ph. Gauthier and L. Migeotte have tended to minimize the socio-economic difficulties of the period in general and at Olbia in particular. They pursue a double historiographic trajectory by joining the ideas of M. Finley with those of L. Robert. Gauthier, for instance says that the 'the financial distress of Olbia cannot be denied' but also that the 'overall total of the sums [furnished by Protogenes] without doubt represented only a small amount when compared

<sup>27</sup> See most recently Chankowski 2007a.

<sup>28</sup> On the territory and its productive capacity, see Müller 2010b: ch. 6.

to the annual total of public revenues in Olbia'.<sup>29</sup> He suggests that Protogenes' actions anticipate those typical of men in the late Hellenistic period, though the benefactor or benefactors 'are not above the laws of the city; as magistrates they are elected and provide accounts at the end of their office'. The perspective here is very clear: we can see how the approach slips from the financial aspect (there is no money in the public purse) to the institutional one (the city controls the notables and not vice versa). There is a possible interconnection between cause and effect: the lack of money sees the city turn to benefactors, and this ends up producing a regime controlled by notables, *grosso modo* the reconstruction offered by P. Veyne.<sup>30</sup> But the problem is that the two essential points (financial crisis and institutional crisis) are not intrinsically linked. Furthermore the recognition of the stability and the efficiency of the institutions at Olbia in the Hellenistic era, which no one suggests is in any doubt, does not mean that the financial and/or economic problem disappears. It is necessary to disentangle the crisis and thereby admit its autonomy, something that primitivists would never have allowed. It is therefore perfectly legitimate to recognize simultaneously both Protogenes' submission to the laws of the city<sup>31</sup> and the reality of the crisis. This does not prevent us from considering what social implications can be seen,<sup>32</sup> but this is a different historical question.

Migeotte, in his turn, has wanted to show how what appears to us today in the Protogenes decree and in other documents as the symptoms of a permanent crisis (resorting to loans, to subscriptions, to benefactors, etc.) was really a normal way of operating. So 'rather than pretending, as is often done, that the cities were constantly on the point of bankruptcy, it seems to me right to conclude that they had integrated these exceptional practices within their sphere of needs and their dealing with the unexpected'.<sup>33</sup> The vision that this view of such difficulties produces is, if not a peaceful one, then at least one that is more moderate. One ends up wondering how far such problems were rhetorical constructions peculiar to honorific decrees. Migeotte was surely right to insist on the fact that turning to such exceptional methods (as they are judged as such today) was *not* a sign of crisis. Subscriptions took place in times of peace, and the demands made of benefactors suggest the social cohesion of the community and the city's confidence (*pistis*) in their reaction to such appeals. But these solutions do not obliterate the existence of the symptoms.

<sup>29</sup> Gauthier 1985: 71.

<sup>30</sup> Veyne 1976: 235–6.

<sup>31</sup> Even if the mention of the rendering of accounts (which is simply a normal process) casts doubt on the fact that this was systematically applied by the others.

<sup>32</sup> As Chandezon (2000: 233) reminds us in relation to crises and war: 'La crise est un phénomène qu'il faut considérer comme inclus dans un cadre social et politique.'

<sup>33</sup> Migeotte 2002: 22.

If we were to try and classify such symptoms, we find that the texts themselves describe them and offer the following triptych: war (*polemos*), food shortage (*sitodeia*), and the lack of money (*aporia tōn chrēmātōn*). It is within this tertiary sequence that the benefactor exercises his talents: in external affairs (missions to mediate problems, embassies, military missions), situations where food is in short supply, and shortfalls in the money supply. This sequence is a common feature of numerous honorific decrees in the third century BC. One thinks of the decrees at Athens honouring Philippides in 283/2<sup>34</sup> or at Erythrai honouring Polykritos after 278/7.<sup>35</sup> One might also cite the decree of Samos honouring Boulagoras in 243/2 BC, where the honorand has served as an intermediary for his fellow citizens with Antiochos Hierax and where through the considerable sums of money that he spent by different methods (advances of money, loans made without interest, loans transformed into gifts etc.), he allowed the city to buy grain and provide for a large number of expenses.<sup>36</sup>

The lexical and syntactical expression of these three problems varies, of course, and the three difficulties do not necessarily function at the same level: food shortage and the lack of money are a common pair and are generally unchanging as such in honorific decrees from the early Hellenistic period onwards, when these terms seem to be attached to each other, while war is first and foremost the variable that allows one to explain the situation for their presence. However, despite the fact that these three problems recur simultaneously, only food shortage has really been studied in any depth by historians<sup>37</sup> on the basis that grain crises (and it is an undeniable observation) were the foremost concern of societies that were struggling to feed their population. We know that the Greeks, like the Romans, did not lack terms to describe this fundamental trouble: food shortage can be described<sup>38</sup> as *spanis sitou*, *limos*, or *endeia*, and reasons for such shortages betray some semantic similarities such as the failure of harvests (*aphoria tōn karpōn*). But the failure of money (*aporia tōn chrēmātōn*) has attracted far less attention, no doubt because of the widespread primitivist approach which tended not to recognize the fundamental importance of the circulation of money in ancient Greek economies. In reality, poor harvest or failure of the harvest are not in themselves sufficient to create a crisis: what is needed for that is in addition the absence of money, because without money the city is unable to alleviate its own insufficient supply of food by turning to the external market. In this respect, the so called 'Kyrene stele'<sup>39</sup> which dates to the end of the fourth century offers important

<sup>34</sup> IG II<sup>2</sup> 657 (Syll<sup>3</sup>, 374; Bielman no. 20; Austin<sup>2</sup> no. 54).

<sup>35</sup> Bielman no. 21.

<sup>36</sup> IG XII 6, 11 (also Pouilloux 2003 [1960]: no. 3; Austin<sup>2</sup> no. 132; extracts *Emprunt* no. 67).

<sup>37</sup> So Garnsey 1988, who never speaks of money.

<sup>38</sup> Garnsey 1988: 18–20, 'the language of food-crisis'.

<sup>39</sup> RO no. 96; Bresson, this volume.

lessons, because we see a city supplying grain for the Aegean markets by the sale (not gift) of grain in a context where harvests have been poor, but where the supply of cash is not so problematic.

In the case of Olbia, a first interesting feature of Protogenes' intervention is that he can assure the city of its capacity to supply food from the regional markets, or even international markets, which in any case go far beyond the level of the *polis*. The benefactor has been considered *a priori* as the owner of a 'large landed territory', because he also supplied grain. But how were his personal estates not affected by the failure of the harvests? It is possible of course, and even very likely, that in fact Protogenes was such a large landowner. But, under the present circumstances, the countryside (*chōra*) was occupied and devastated by various hostile invaders (*ethnē*): in such a situation the supply of food can only have been made by sea, via the Aegean markets. Polybios himself recalls how at Byzantion in the 220s, i.e. a time that corresponds precisely to that of Protogenes' activity, the coastal regions of the Black Sea were sometimes not only exporters but also importers of grain.<sup>40</sup> Olbia offers a perfect illustration of such a situation, though a scenario like this should not be applied to earlier periods<sup>41</sup> as evidence that the production capacity of the northern Black Sea region has been overestimated for the classical period. Polybios' evidence is surely relevant for the third century BC, not least for the 220s themselves, because of the mention of the Gauls in the text who settled on the territory, if only better to apply pressure on the *polis*.

A second important element: relations with the surrounding barbarians seem to have been an essential factor. But it is necessary to distinguish between those who demand tribute and those who attack the territory. Here, rather than being concerned with the possible ethnic identity of these peoples, a question that has attracted an excessive amount of attention,<sup>42</sup> we might consider their behaviour. The first are the *ethnē* collectively referred to by the name *Saioi* who occupy a large part of the clauses on side A of the inscription. The text also describes them as 'kinglets' (*skeptouchoi*) of whom a certain Saitapharnes has to be flattered and treated with some considerable attention (*therapeuein*). The attackers are themselves referred to on side B by various names (Celts or Galatians, *Skiroi*, *Thisamatai*, Scythians, and *Saudaratai*), among which the Galatians must carry off the prize for displaying the greatest cruelty because even the others are fearful of them. Against such forces the only solution is a military one and requires that the walls be restored to a functionally defensible condition. The two instances here are totally different. The payment of tribute is an operation that Greek cities viewed with some distaste, but nevertheless the numerous communities who were

<sup>40</sup> Polyb. 4.38.5.

<sup>41</sup> As Tsetsckhladze 2008: 50 and 56–7 does once again, where all periods are mixed up.

<sup>42</sup> On the ethnonyms and their classification in the decree for Protogenes, see Müller 2009.

required in the Classical and Hellenistic eras to hand over such payments is considerable: here one thinks of the *poleis* of Asia Minor who passed successively from Persian domination to the Athenian Empire and then to the Seleukid Kingdom. But tributary relations, violent perhaps on a symbolic level, do not *per se* incorporate physical violence, because the kings have an interest in preserving the security and wellbeing of those who are a significant source of royal revenue. In exchange for tribute, the kings provide a level of protection that nurtures prosperity. This relationship has all the hallmarks of a negotiation and therefore implies a fundamental rhetorical dimension. The tributary mechanisms are often very sophisticated indeed, as we can see for example in Asia Minor at Herakleia Latmos, where between 196 and 193 BC<sup>43</sup> Antiochos III relieved the city of a series of taxes so that the community should not totally decline. Royal benefaction has here an economic perspective and does not last forever, as the tribute payments will be restored when the city once again has the means to pay them. The Olbian version of such a situation is less peaceful: but so long as the city has revenues, the tribute payments to the kinglets (*skeptouchoi*) are not in themselves a major problem. The text of Side A of the Protogenes inscription indicates no cause-and-effect relationship between the presence of the *Saioi* and the episodes of food shortage. However, the attacks of the other *ethnē* are directly responsible for the shortage (B 80–2) as well as for demographic losses, as the text clearly identifies (B 14–21), and so for the crisis in its most acute aspects. The protection that the tribute payments were meant to secure did not function on this occasion, either because the *Saioi* had for that time disappeared from the stage or because they too were powerless in the face of the Galatians/Celts. The city of Olbia occupies a position in the northern Black Sea region which until Mithridates VI lay largely outside the sphere of influence of the Hellenistic kings. That made any appeal to these powers almost certainly futile.

## THE CIRCULATION OF CASH/MONEY

Of the three components of the Olbian crisis, the crucial one is definitely the absence of cash, a crisis of liquidity: but here still one must not be mistaken about this issue. Ph. Gauthier thought that Olbia's difficulties came from the lack of 'réserves'.<sup>44</sup> However one does not necessarily expect a Greek city to enjoy the comfort of 'réserves', nor that their very absence should be a problem: it was the sanctuaries that were likely to hold and deploy their stores of moneyed or

<sup>43</sup> See the text of the letter of Zeuxis to the Heracleots in Ma, Appendix nos. 31, II, III, and IV.

<sup>44</sup> Gauthier 1985: 70: 'la cité d'Olbia . . . semble moins manquer de ressources et de revenus que de réserves.'

uncoined metal and so exercise their potentially liquid assets, as one sees in the example of Polycharmos and the sacred vases. A city that has no empire or military power, such as was enjoyed by Classical Athens or Hellenistic Rhodes for example, has not the capacity to exploit others financially, and so is limited in its ability to build up reserves. However, communities of this kind have to balance expenditures and revenues carefully, a common concern according to Migeotte.<sup>45</sup> The difficulties arise *not* when the city no longer has any reserves but when it is in deficit: and such a scenario revolves around the circulation of money.

The decree honouring Protogenes is therefore an excellent example of what we might call 'the disruption of cash flow'. The nodal element of this crisis which blocks all other operations remains the inability to realize the tax revenues because the *telōnai* appear to have retained the money they should have handed over to the magistrates (A 49–51). We can imagine that those who farmed the taxes were not likely to be forthcoming about paying the due money to the city. However the primary reason for their not having paid what was owed is most likely to have been their own inability to collect from individuals the taxes that they had undertaken to raise. The clemency displayed by Protogenes to the tax farmers at the end of the decree (B 66–7) when he was in charge of the oversight of financial affairs is symptomatic of this situation: the tax farmers were not charged with the responsibility for the situation, though the money could have been recovered from their own property. No, in fact the origin of this particular problem resides far more in the general lack of liquidity in the wider population which has paralysed the financial potential of individuals: these are just as in debt as the city is to Protogenes and other financiers (Side B, line 88).

The non-collection of taxes has, in its turn, massive repercussions on the payment of tribute. Tribute payment depends on a sophisticated process that is described in length in the decree (A 45–58). The journey to the royal residence has also been farmed out, and the city itself owes, by decree, 300 *chrysoi* to the contractor of the tax: the operation has been cancelled on two occasions because of the lack of money resulting from the failure to collect other taxes. The farming out only succeeded at the third attempt (performed by Phormion) and thanks to the intervention of Protogenes.

The first point that needs to be clarified in this context is that the tax farmers (*telōnai*) who fail to hand over the taxes due are not the same as those who, one after the other, act as purchasers of the *stolos* tax. The latter do not hand over money but take responsibility, at least partially, for the costs of the embassy. A second issue is that the reference to the 300 *chrysoi* that the city must pay to the

<sup>45</sup> Migeotte 2002: 14.

tax telonēs-cum-ambassador looks in itself unusual. I would exclude that the sum involved was destined as a payment to the kinglets themselves for two reasons. First, the payments made to the *skeptouchoi* are always identified precisely as just that, and secondly, even if the act of drafting and passing a decree about the embassy demonstrates that the city is appropriating the event on an institutional level, it remains difficult to see why the citizens would vote about a non-negotiable (or in any case previously negotiated) tribute payment. In fact the sum of 300 *chrysoi* is more than likely to be for the ambassador himself: one must think of this more as an advance to be reimbursed, or as an all-inclusive payment made for a mission that was not without danger. It is worth asking why rich Olbiopolitans would take it upon themselves to farm out this diplomatic mission. It is likely that to establish privileged relations with the kinglets could have had beneficial personal economic consequences for those who contributed to such diplomatic activities. It is not irrelevant therefore to see that Protogenes was, at one stage, responsible for another of these embassies (A 89–93) and to observe, on the other hand, that he was also one of the few to have access to supplies of grain wherever they came from.

Another complex operation requiring the spending of funds that were in short supply or absent was the responsibility for the auction of the construction of the walls.<sup>46</sup> The city, once the contractors had been designated, was required to make a down payment to establish the construction project (B 32–7). Once again it is Protogenes who pays the 500 *chrysoi* that are required to meet this payment, and thanks to it ‘the contractors have started to make payments against the sum at their disposal’: in other words the contractors have been able to start making payments for the building costs and for salaries.

Overall one can see that Protogenes’ action injects the financial liquidity into the system, which could otherwise not function. The description of this process is precisely the same when Protogenes makes payments in money or in grain, because in this text we see, as in so many others, that there is a full equivalence between these two commodities. The idea here is not to come back to any interpretation in terms of barter, nor of any primitive form of exchange in kind. The text, which speaks only of money and of the circulation of coins, precludes any kind of argument of that form. It is enough to state that grain equals money, because it can be resold at any time and, in turn, so become a further source of liquidity (see also Criscuolo, this volume). Furthermore, the means of payment in kind and in money can be interlinked: the one can ride piggyback on the other without any linear association between them; likewise the loans and sales of grain on credit function identically. It is useful here to cite the example that Polybios<sup>47</sup> describes in the wake of the

<sup>46</sup> Cf. Maier 1959: 269–70.

<sup>47</sup> Polyb. 5.88–90.

earthquake at Rhodes in 227 BC, when the Hellenistic kings compete in a game of generosity motivated largely by economic interests. The royal gifts offered to the Rhodians are made in kind and in money, but among the gifts in kind it is necessary to distinguish those that have a direct use for the restoration of the fleet, namely wood, cloth, pitch, etc., from gifts of grain (from Egypt for example) that can be used for resale.

## POSSIBLE REASONS FOR A CHRONIC DEFICIT

The fundamental question that underlies this chapter is ultimately whether we can identify the short term and/or structural reasons for a chronic deficit, such as that which the Protogenes decree indicates. Moreover, it is important to establish whether this kind of crisis was characteristic of Hellenistic economies. First of all we can dismiss straightaway the idea of monetary crisis that has been so often suggested by Russian historians<sup>48</sup> and numismatists of the northern Black Sea in the third century BC. Of course, the striking of a gold coinage stopped in Olbia at the start of the third century BC. The silver emissions that followed (300–250 BC) suffered from reduced quality of the precious metal content and the instability of the weight of the drachma. Silver coinage subsequently ceased to be struck and instead bronze coinage alone was issued. But we know that, starting from the years 280–270 BC, not only this region, but also the whole of the Greek world, experienced a reduction in monetary emissions. If we turn to the Protogenes decree we find that silver is not mentioned at all. At this time, gold is circulating in the Black Sea. These gold coins, called *chrysoi* and mentioned in other inscriptions,<sup>49</sup> were not local but were staters issued on the Attic weight standard by Philip, Alexander, or Lysimachos. Such gold staters have been found in several hoards. It is with these coins that the Olbiopolitans made their ‘gifts’ to the *skeptouchoi*, who were unlikely to have been satisfied by receiving bronze. However the abundant circulation of bronze is not synonymous with a monetary crisis, but rather a sign of the modernization of the system.<sup>50</sup> The most complex question to resolve concerning the local money is the meaning of the phrase *ek tetrakosiōn*, used in reference to the reimbursements made to Protogenes. According to the text the benefactor on two occasions (A 70–1; B 43–4): *δοὺς χρυσίον πᾶν χαλκὸν ἐκομίσατο ἐκ τετρακοσίων*. The figure of 400 *chrysoi* has been understood either as a recovery in bronze of the equivalent of 400 gold

<sup>48</sup> See most recently Stolba 2005.

<sup>49</sup> *IOSPE I*<sup>2</sup>, 25 + 31 (end of the fourth century BC?); *I.Olb* 28 (middle of the third century?) and 34 (*chrysoi* restored; end of the third/start of the second century BC?).

<sup>50</sup> On monetary crises and the circulation of bronze, see Grandjean 2007: 87–9.



stater (instead of a total recovery in gold), or as an indication of a rate, which would therefore have been 400 bronze coins for a stater of gold. The first solution can probably be ruled out, in so far as the expression is repeated on two occasions in the text, but both times for different sums. Therefore it is likely that the phrase refers to a rate, of a 'euergetic' kind that was advantageous for the city: why else would the decree specifically mention this if not to emphasize the advantage to the city of this ratio? We can therefore offer the following translation: 'though he had paid in gold, he recovered the total sum in bronze at the rate of 1:400'.<sup>51</sup> As L. Migeotte has emphasised, Protogenes could not do much (except locally) with the bronze coinage that had been given to him, but the objective was obviously not Protogenes' interest. A 'monetary crisis' is difficult to see here and rests on old and erroneous assumptions, such as the association between decline and the striking of bronze coinage or the interruption of minting from precious metals. It is clear that the city of Olbia did not need to strike its own coinage in gold, since it used a new international standard after the end of the striking of Cyzicene staters around 300 BC. Protogenes is the best witness of this: he spends *chrysoi* to help his fellow citizens. As for the local transactions, they were completed thanks to the coinage struck in bronze in the name of the city. The problem is therefore not a monetary but a financial, and maybe an economic one.

The first feature to assess as characteristic of Hellenistic economies is the greater complexity of financial techniques that were foreshadowed by those practices developed in Classical Athens.<sup>52</sup> Some Aegean cities developed rather elaborate systems that were at times very ingenious for promoting the circulation of liquidity. For example one thinks of the famous public subscription, known as the Law of Samos in about 260 BC.<sup>53</sup> This regulation created a public fund for the purchase of grain, and seems at first sight to have addressed a single issue, namely the feeding of the city. But its financial consequences are less obvious, subtler and a lot more important in quantitative terms. Thus, it had not escaped L. Migeotte<sup>54</sup> that the quantity of grain finally distributed to the citizens could correspond only to a small proportion of the real amounts needed to feed the community. Simple solutions could have been adopted, such as the use of a straightforward subscription or a euergetic gift that would allow the direct purchase of grain. Instead, the money from the subscription finances a foundation, a productive capital sum of which one spends only the interest.<sup>55</sup> This subscription (on Samos) produced about

<sup>51</sup> I therefore disagree with the translation at *Emprunt* 136 §§4 and 6 and 138 n. 424.

<sup>52</sup> Davies 2004; Chankowski 2007b: 105–6.

<sup>53</sup> *IG XII 6*, 172 (= *SIG<sup>3</sup>* 276); translated, Austin<sup>2</sup> no. 135.

<sup>54</sup> Migeotte 1990 and 1992: 190–1. The distribution would have been only 6 to 8 daily rations per year for a population of 5,000 to 7,000 citizens.

<sup>55</sup> On the development of this financial technique in the Hellenistic era, see Chankowski 2007b: 105–6.

50,000 drachmai, or just over 8 talents, based on a total of around 300 subscribers who came from about 250 families: this operation amounts to a 'levy' made upon the elite of the city. Money in a foundation of this nature is therefore employed to yield interest, without which it would not produce the amounts needed to buy grain. Through this process, the city makes an offer of credit to other more diversified elements of the population. On top of that, the grain is, at least in part, purchased (and not deducted for free) using the reserves of the goddess Hera, and so builds up a reserve of cash that can be used in case of public shortage of money.<sup>56</sup> In short, in this Samian document, grain may well hold the primary place in terms of the discourse, but the circulation of money is really the principal concern. But as soon as there is a shortage of money, the sophistication of these systems, dependent as they are on the supply of cash, makes the situation both visible and unbearable, as has been seen in the auction of the farming out of the *stolos* at Olbia.

The second crucial point is the global increase in expenditure, productive or otherwise. Expenses are clearly referred to in the Olbian decree and belong to well-known categories such as the purchase of grain, the payment of tribute or the construction of walls. But a typology is not sufficient, because it fails to detect any evolution from the Classical era and beyond. Among these expenses, two elements, at least in the case of Olbia, seem to be more specific to the Hellenistic era: tributary contributions and the steep escalation of price of grain. In contrast to its counterparts in Asia Minor, it is not certain that the city of Olbia had to pay tribute to any king before the second half of the third century BC. In other words, these payments, which were often quite demanding and difficult to anticipate (one did not know when the King was going to pass by and claim the 'gifts of his passage', τὰ δῶρα τῆς παρόδου, A 11), were a considerable form of expenditure and result in the transfer of huge sums of money when considered against the scale of the Greek *polis*.

Another element also affected dramatically global expenditure: the prices of grain. This commodity presents a problem, not because there can be shortages of it, but because of the considerable change in prices that could take place.<sup>57</sup> So during the first *sitodeia* under the priesthood of Herodoros (A 23–32), the price of grain stood at 0.2 gold staters for a medimnos, and the generosity of Protogenes consists at first in selling the commodity at half-price, namely 0.1 stater per medimnos. The second crisis (A 58–81) happened sometime after (but how soon is not known) the first and was a harsh one (*σιτοδείας γενομένης ἰσχυρᾶς*). The prices jump out of control: the medimnos is worth

<sup>56</sup> As Bresson (254–7) has shown.

<sup>57</sup> To borrow the very useful phrase of Descat (2004: 271) concerning Athens in the last third of the fourth century BC: 'le fait le plus caractéristique de cette période est moins la crise frumentaire en elle-même, qui n'est ni la première, ni la dernière, que le niveau des prix'.

0.6 staters, three times more than before, and within a short period of time increases further to the height of 1.66 staters, an additional increase of 166 per cent. Protogenes therefore gives 1,000 *chrysoi*, which allow the community to buy, if that current market price was in force, just over 600 medimnoi; but he also facilitates the sale of 2,500 medimnoi at a good price: the first 500 medimnoi at the price of 0.24 staters and the other 2,000 medimnoi at 0.387 staters per medimnos. If we were to translate these prices into silver drachmas at the expected rate of 20 drachmai for a gold stater, we can see that the initial price that was considered by the city to be high was 4 drachmai per medimnos. It is not straightforward to compare these prices with others, even if the normal price of a medimnos of grain in the retail market was often considered at around 5 drachmai per medimnos. This figure is certainly the one found in the 320s in Athens<sup>58</sup> or at Samos<sup>59</sup> in c.260 BC. It is clear, however, that the prices found on Aegean markets elsewhere were higher still. On Delos, in 282 BC, the price of grain was a little over 6 drachmai the medimnos, but around 10 drachmai in the first third of the second century BC.<sup>60</sup> The initial price of the medimnos at Olbia seems in fact rather low, a phenomenon explicable because this was also, under normal circumstances, the place of production. When importation was necessary, as Polybios shows when speaking about the economic situation at Byzantium in the same period,<sup>61</sup> prices rise, a consequence that is not particularly surprising. The fluctuation of price reflects above all the direction of commercial flow. In a general manner, if we wish to think of the problem of uncontrolled inflation, we can follow the suggestions made by R. Descat<sup>62</sup> on the 'grain crisis' that affected Athens in the 320s: the escalation of grain prices is in short the result of the presence of a real market for this commodity.

Finally a further point that really deserves a much more thorough study is the quantification of the expenditure of benefactors. Here we need to examine the relationship between the deficit of the city and the reserves of the benefactors: is there a relationship of cause and effect between the two? The greater complexity of financial systems and the possibility of borrowing money which we can see developing in the Hellenistic era precipitated the cities, Olbia included, into a debt spiral which of course they rarely acknowledge, but which one needs to keep in mind. One might look, for example, at Miletus

<sup>58</sup> Dem. 36 (*Against Phormion*) 39: the character named Chrysippos and his associate sell their grain at 5 drachmai even though the market price rose to 16 drachmai the medimnos. On the question of the price of grain, see the fundamental remarks made by Bresson 286.

<sup>59</sup> Once again in the 'Law' at Samos on grain (*IG XII 6, 172*) the price that had to be paid for the grain from the sacred land of Anaia was a minimum price fixed by the People, of 5 drachmai and 2 obols (lines 25–7).

<sup>60</sup> Reger 1994: 307.

<sup>61</sup> Polyb. 4.38.5.

<sup>62</sup> Descat 2004: 279.

in 211 BC<sup>63</sup> when the city invented a remarkable system, a parallel for which can be next seen only in the medieval period. This consisted of a loan made up by a subscription from the population, which replaced the classic system of interest-bearing capital with a lifetime rent that was especially dangerous for the public finances in the long term, even if there was not yet a crisis situation. All depended in this instance on the life expectancy of the contractors, who were perfectly aware of the advantages of this mechanism and subscribed to the operation using the name of their children. If we return now to Olbia, the loans there are not all *atokoi* (interest free) on the one hand, and are not always transformed into gifts on the other. There is no reason why such loans could not be operating simultaneously. Altogether, even if the situation of Hellenistic cities could vary a lot according to time and space, these were entities that were really or potentially deeply in debt, and were paying often high rates of interest to some individuals, not all of whom were outsiders (contrary to some widely held opinions).<sup>64</sup> And it is a well-known fact that loans are a way for wealthy people to get even richer, as they (normally) recover their capital with interest, at the expense of the whole population, which is a big difference from taxes. The development of loans structurally increases the wealth of the wealthiest. Hence, if Protogenes is rich, it is not only because he is capable of pursuing business abroad, but also because the whole city owes him money, both individuals and the state. The abolition of debts declared at the end of the decree can only have been preceded by long periods of collection of interest payments. Although the decree presents a series of selected successive events, it is clear that the crisis tends to persist and that indebtedness becomes a systemic problem, as the accumulation of debts over two generations of benefactors demonstrates. The pitiful state of the walls and the public ships confirms the idea that for a few years, if not longer, the city had had no means of investing in essential infrastructure.

To end this chapter that has focused on the financial aspects of the Olbian crisis, all that remains is to raise a more general question that cannot really be answered straight away. How is this crisis of liquidity linked with changes that were peculiar to the Hellenistic period and that concerned what one would call nowadays the 'real economy'? We have touched partially on the problem of changing grain prices and the integration in the sometimes complex mechanisms of the market. This remains without doubt an avenue which is worth pursuing in a more systematic way.

<sup>63</sup> *Emprunt* no. 97, with the adjustment to the date, as in Marcellesi 58, in the light of the new chronology of the stephanephoric magistrates.

<sup>64</sup> See e.g. Migeotte, *Emprunt* 371–2, who distinguishes between euergetic loans granted by the citizens to their own cities and business loans made by foreigners to the same cities.

## Bibliography

- ALSTON, R., and VAN NIJF, O. (eds.) (2008), *Feeding the Ancient Greek City*. Leuven.
- ANDREAU, J., and CHANKOWSKI, V. (eds.) (2007), *Vocabulaire et expression de l'économie dans le monde antique*. Bordeaux.
- , BRIANT, P., AND DESCAT, R. (eds.) (2000), *La guerre dans les économies antiques*. Saint-Bertrand de Comminges.
- BOGAERT, R., and VAN LOOY, H. (eds.) (1990), *Opes Atticae : miscellanea philologica et historica*. Steenbrugge.
- BRESSON, A. (2005), 'Coinage and Money-Supply in the Hellenistic Age', in *HellEc* II: 44–72.
- BRINGMANN, KL. (2001), 'Grain, Timber and Money. Hellenistic kings, finance, building and foundations in Greek Cities', in *HellEc* I: 205–14.
- and VON STEUBEN, H. (1995), *Schenkungen hellenistischer Herrscher an griechische Städte und Heiligtümer*. Berlin.
- CAPDETREY, L., and LAFOND, Y. (eds.) (2010), *Pratiques et représentations des formes de domination et de contrôle social dans les cités grecques, VIII<sup>e</sup> s. a..C.-I<sup>er</sup> s. p.C.* Bordeaux.
- CHANDEZON, CHR. (2000), 'Guerre, agriculture et crises d'après les inscriptions hellénistiques', in *Andreau et al.* 2000: 231–52.
- CHANKOWSKI, V. (2007a), 'Les catégories du vocabulaire de la fiscalité dans les cités grecques', in *Andreau and Chankowski* 2007: 299–331.
- (2007b), 'Les places financières dans le monde grec classique et hellénistique des cités', *Pallas* 74: 93–112.
- (2008), *Athènes et Délos à l'époque classique. Recherches sur l'administration du sanctuaire d'Apollon délien*. Athènes-Paris.
- CHRISTOL, M., and MASSON, O. (eds.) (1997), *Actes du X<sup>e</sup> congrès international d'épigraphie grecque et latine, Nîmes 1992*. Paris.
- COHEN, E.E. (1992), *Athenian Economy and Society: A Banking Perspective*. Princeton.
- (2008), 'Elasticity of the Money Supply at Athens', in *Harris, W.V. (ed.) (2008), The Monetary Systems of the Greek and Romans*. Oxford, 66–83.
- DAVIES, J.K. (2004), 'Athenian Fiscal Expertise and its Influence', *MediterrAnt* 7: 491–512.
- DESCAT, R. (2004), 'Les années 330–325 av. J.-C. et la politique athénienne du blé', *Pallas* 64: 267–80.
- GABRIELSEN, V. (2005), 'Banking and Credit Operations in Hellenistic Times', in *HellEc* II: 136–64.
- GARNSEY, P. (1988), *Famine and Food Supply in the Graeco-Roman World*. Cambridge.
- GAUTHIER, PH. (1985), *Les cités grecques et leurs bienfaiteurs, IV<sup>e</sup>-I<sup>er</sup> siècle avant J.-C.* Paris.
- GRANDJEAN, C. (2007), 'Guerre et crise de la monnaie en Grèce ancienne à la fin du V<sup>e</sup> siècle av. J.-C.', in *Théret* 2007: 85–102.
- HOWGEGO, C. (1995), *Ancient History from Coins*. London.
- MAIER, F. G. (1959), *Griechische Mauerbauinschriften I*. Heidelberg.
- MIGEOTTE, L. (1990), 'Distributions de grain à Samos à la période hellénistique: le 'pain gratuit' pour tous?', in *Bogaert and Van Looy* 1990: 297–308.

- MIGEOTTE, L. (1992), *Les souscriptions publiques dans les cités grecques*. Genève.
- (1997), 'L'évergétisme des citoyens aux époques classique et hellénistique', in Christol and Masson (1997): 184–96.
- (2002), 'La cité grecque, les citoyens et les finances publiques', *LEC* 70: 13–26.
- (2006), 'La gestion des biens sacrés dans les cités grecques', in *Symposion 2003*: 233–46.
- MOATTI, CL., KAISER, W., and PÉBARTHE, CH. (eds.) (2009), *Le monde de l'itinérance en Méditerranée de l'Antiquité à l'époque moderne. Procédures de contrôle et d'identification, Istanbul juin 2005*. Bordeaux.
- MÜLLER, CHR. (1995), 'Épaminondas et les évergètes de la cité d'Akraiphia au I<sup>er</sup> s. de notre ère', *B' Diethnes synedrio Boiôtikôn Méléton*. Athens: 455–67.
- (2009), 'Nomades scythes et États grecs du Nord de la mer Noire (VII<sup>e</sup>-II<sup>e</sup> s. av. J.-C.)', in Moatti and Kaiser (2009): 93–112.
- (2010a), 'Les élites béotiennes et la richesse du IV<sup>e</sup> au II<sup>e</sup> s. a.C. : quelques pistes de réflexion', in Capdetrey and Lafond 2010: 225–244.
- (2010b), *D'Olbia à Tanaïs. Territoires et réseaux d'échanges dans la mer Noire septentrionale aux époques classique et hellénistique*. C. Bordeaux.
- POUILLOUX, J. (2003 [1960]), *Choix d'inscriptions grecques*. Paris.
- REGER, G. (1994), *Regionalism and change in the economy of independent Delos, 314–167 B.C.* Berkeley.
- ROBERT, L. (2007), *Choix d'écrits*. Paris.
- SHIPTON, K. (2000), *Leasing and Lending in Classical Athens (BICS Supplement 74)*. London.
- STOLBA, V. F. (2005), 'Monetary Crises in the Early Hellenistic Poleis of Olbia, Chersonesos and Pantikapaion. A Re-assessment', in: *XIII Congreso Internacional de Numismática (2003)*, Actas. Madrid, 395–403.
- THÉRET, B., (ed.) (2007), *La monnaie dévoilée par ses crises. I: Crises monétaires d'hier et d'aujourd'hui*. Paris.
- TSETSKHLADZE, G. R. (2008), "'Grain for Athens". The View from the Black Sea', in Alston and van Nijf 2008: 47–62.
- VEYNE, P. (1976), *Le pain et le cirque. Sociologie historique d'un pluralisme politique*. Paris.
- VINOGRADOV, JU. A. (1999), 'The Black Sea after the Fall of the Great Scythia', *Hyperboreus* 5: 56–82.
- VINOGRADOV, JU. G. (1989), *Politicheskaja istorija olviskogo polisa* [= A Political History of Olbia]. Moscow.
- and KRZYHIC'KIJ, S. D. (1995), *Olbia, eine altgriechische Stadt im nordwestlichen Schwarzmeerraum*. Leiden.