IMPERIALIST DEMOCRACY AND MARKET-ORIENTED PASTORAL PRODUCTION IN CLASSICAL ATHENS

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Summary

This article examines the impact upon pastoral production of the imperialist policies of the classical Athenian democracy and the internal tribute which it levied from its own wealthy citizens. Rich Athenians, burdened by financial obligations which were required to fund the state's military commitments, typically suffered from a chronic liquidity crisis. One means of generating the necessary cash was the rearing of livestock for the production of cheese and high-quality wool and the provision of animals as sacrificial victims. This production was aimed at the urban markets of Athens and Peiraieus which experienced a massive growth in resident population. The purchasing power of town-dwellers was underpinned by their position as the main recipients of money extracted from the rich through the employment created by state activities, above all in the fleet, and through the provision of payments to poor citizens. Hence there developed a selfsustaining cycle of pastoral production and demand which was broken only by the demise of democracy towards the end of the fourth century BC.

Key Words

Imperialist, Democracy, Pastoral production, Athens

Introduction

Although this paper was written as a contribution to the session on *Tribute and Warfare*, its subject-matter intersects with several of the papers on *Provisioning Towns* and on *Specialization for Trade and Exchange*. Indeed, in some respects it sits rather uneasily within a theme devoted to the role of animals and their products in the context of tribute and warfare. This is not because there was no *direct* use of animals as tribute or in warfare in classical Athens. One burden which the

Résumé

Démocracie impérialiste et production pastorale de marché durant la période classique à Athènes.

Cet article examine l'impact sur la production pastorale des politiques impérialistes de la démocratie classique athénienne et du tribut interne qu'elle a perçu de ses citoyens fortunés. Les riches athéniens, accablés d'engagements financiers nécessaires aux activités militaires de l'Etat, ont typiquement souffert d'une crise chronique de liquidité. Un moyen d'obtenir l'argent liquide nécessaire a été l'élevage de bétails pour la production de fromage et de laine de haute qualité et l'approvisionnement d'animaux pour des sacrifices. Cette production était destinée aux marchés urbains d'Athènes et de Peiraieus qui ont connu une croissance énorme de leur population résidentielle. Le pouvoir d'achat des citadins a été maintenu grâce à leur position en tant que principaux bénéficiaires d'argent soutiré des riches, grâce a la création d'emplois dans les activités de l'Etat, surtout dans la flotte, et à l'approvisionnement de paiements aux pauvres. De là, s'est développé un cycle indépendant de production pastorale et de demande qui a seulement été rompu vers la fin du quatrième siècle av. J.-C. par la mort de la démocratie.

Mots clés

Démocratie impériale, Production pastorale, Athènes

Athenians imposed upon their imperial subjects in the fifth century BC was that each state should bring a cow to the quadrennial festival of the Greater Panathenaia (refs. in JAMESON, 1988: 93). Yet this symbol of subjection was trivial in material terms compared to the annual cash tribute which was the mainstay of Athens' control over her empire. Similarly, although classical Athens did possess a sizeable cavalry force, it was still dwarfed in significance, even in land warfare, by the hoplite infantry. In any case Athens' main military arm

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was naval; it was the fleet that was the basis of her empire and her democracy. The most important connections between tribute and warfare, on the one hand, and the trade and exchange of animals and their products, on the other, were complex and *indirect*; but I shall argue they were no less significant for that.

This paper will examine the impact of the financial and military policies of the classical Athenian democracy upon the development of market-oriented pastoral production. State policies had a considerable effect upon the private finances of Athenian citizens, both rich and poor, and consequently upon the production of and demand for pastoral products.

Warfare and the finances of the rich

The fundamental principle of Athenian democracy in the fifth and fourth centuries BC was the political equality of all citizens. Although the democracy eschewed any attempt at redistribution or equalization of property, it insisted that rich men expend a proportion of their wealth for the benefit of the community. It established a system of liturgies by which a large number of wealthy men, perhaps around 1,200 in number, were compelled to take regular turns in funding various community activities. Some of the details are controversial (cf. esp. DAVIES, 1971: xxxxiv: id., 1981; RHODES, 1982; MACDOWELL, 1986), but it seems likely that in the fourth century this liturgical class numbered around 1,200 men and consisted of those who owned property with a capital value of 3-4 talents (18,000 - 24,000 drachmas) and over. The cost of liturgies varied greatly. The cheaper, so-called festival liturgies, which involved underwriting a performance at a public festival, might cost up to 2,500 drachmas, 10 per cent or more of the total property valuation of the least wealthy men liable. But by far the most expensive liturgy was that connected with naval warfare, the trierarchy, which involved meeting the cost of equipping a trireme of some 170 rowers. Attested annual costs range between 3,000 and 6,000 drachmas. Although the trierarchy was mostly borne by the richest eligible men, the weight of the burden is evident in the fourth century from the increasing practice by which the post was shared by two men (JORDAN, 1975: 70-3) and from the passing of laws which spread the costs among a wider group of wealthy citizens.

Two points deserve attention. The first is that down to 355 BC classical Athenian policy was almost

unceasingly imperialist. In the fifth century Athens built up a large naval empire in the Aegean. Empire and democracy were mutually implicated. It was the military importance of the fleet, manned to a significant extent by poor citizen rowers, which stimulated the implementation of fully democratic reforms. Imperial tribute also made it easier for the state to pay poor citizens for engaging in political activities. The empire was lost at the end of the fifth century through Athens' defeat in the Peloponnesian war, but its restoration remained her objective for much of the fourth century. Even after 355 when defeat in the Social war enforced the abandonment of her ambitions, her dependence upon imported grain necessitated continuing defensive interference overseas. But, and this is my second point, Athens' fourth-century campaigns had to be sustained without the aid of most of the resources of the previous century, most notably imperial tribute.

The costs of warfare now fell fully upon rich Athenians, many of whom had lost private estates which they had held in formerly subject territories. Wealthy men also had to fund not only the liturgies but also the eisphora, a percentage levy upon the capital of the largest properties. This was imposed with increasing frequency in the fourth century (about 15-20 times in the period 395-335: THOMSEN, 1964: 226-38; cf. 172-180) when the state often needed additional resources to fund its war-making. Many men among the lower reaches of the well-to-do appear to have had considerably difficulty meeting their eisphora payments, to judge from the accumulation between 387/7 and the mid-350s of 14 talents of arrears (DEMOSTHENES 22.42-4) and from the reform during the 370s of the system of collection according to which the richest 300 men were required to advance the total amount of the tax.

Such difficulties are not surprising since the community had in effect transferred to its own wealthy citizens the tribute formerly demanded of its imperial subjects. This internal tribute was then redistributed to poorer citizens, and even to outsiders, in the form of pay, particularly for service in the fleet. Most rich Athenians were, however, willing collaborators, indeed competitors, in this system, since by advertising their public-spirited generosity, by contributing more than the required minimum and by adding other voluntary benefactions besides, they both safeguarded their collective domination over property-ownership and advanced their individual claims to public respect and political leadership.

Liquidity crisis and pastoral production

These financial pressures stemming from the state's military engagements formed a major additional financial drain on top of the normal expenditures demanded by the competitive elite lifestyle of the rich. The consequence was a constant crisis of liquidity and indebtedness for many rich Athenians, most of whose wealth was tied up in capital holdings, especially in land (FINLEY, 1981/1953: 74; OSBORNE, 1990). The evidence of fourth-century forensic speeches indicates that rich men responded by making serious efforts to maximize their cash incomes in a variety of ways through working the silver mines, hiring out slaves, letting accommodation in city tenements, leasing land or taking on tax-collecting contracts.

These efforts extended into the agrarian sphere. The traditional view of Greek agriculture is that it suffered from low productivity and profitability; but this deeplyingrained belief is dependent upon a number of assumptions about ancient farming practices, such as the supposed dominance of biennial bare fallowing, which are nowadays increasingly being called into question (eg. WHITE, 1970: 119-23; HALSTEAD, 1987; HODKINSON, 1988: 41-5). Robin Osborne has recently, and I think rightly, argued that much of the finance required by the Athenian rich must have come from agrarian production and that this must have drawn wealthy landowners into production for the market in a big way (OSBORNE, 1990). The case of a certain Phainippos ([Demosthenes] 42) indicates that on his estate the sale of wood along with cash crops of barley and wine were producing an annual income of at least 5,000 drachmas. This example is of particular interest in the light of Hamish Forbes' important study of "the struggle for cash" in the North-Eastern Peloponnese (FORBES, n.d.) which demonstrates how animal husbandry and the exploitation of woodland products have been alternative methods of cash-generation for arable farmers throughout the last four centuries.

The fourth-century Athenian evidence suggests that many large landowners who lacked Phainippos' woodland resources used the sale of pastoral products as an important means of supplying their need for ready cash. I say "suggests" advisedly because, as in most fields of ancient economic history, the evidence is rather patchy, consisting of a limited number of brief, passing references by writers whose real interests lie elsewhere. Restricted, however, as the range of evidence is, it points in a common direction. The main pattern which

seems to emerge is the rearing of ovicaprines, often from a farm base near the city or in the nearby Athenian plain, aimed primarily at the profit-oriented production of cheese and of high-quality wool together with the sale of young adult (one to three-year old) animals for sacrifice and meat consumption (cf. JAMESON, 1988: 102 & 104).

First, there are a number of general pieces of evidence. In Xenophon's Memorabilia (4.3.10) Sokrates is made to say that men gain food and produce wealth no less from animals than from crops. A character in Antiphanes' play The Seamstress (apud Athenaios, Deipnosophistai 402B-E) justifies his eating of sheep and goats which have as yet produced no cheese or wool on the grounds that "the profits from full-grown animals are such that I can put up with eating these poor ones". From a speech of Lysias (23.6) we learn that the fresh cheese market in Athens was such a significant landmark that men from Plataia resident in Attica used it as their regular gathering-place. The excellence of Attic wool seems to have become proverbial, so much so that the enquiry "What other wool is softer than Attic?" is cited as an example of a foolish question (Athenaios 219A). Already in the late sixth century the tyrant Polykrates of Samos specially imported Attic sheep alongside famous woolbearing breeds from Miletos (Athenaios 540D); and in the fourth century we find wool listed by Antiphanes among the particular products of Attica (Athenaios 43C).

More interesting still are a number of attested cases of owners of livestock :

Demosthenes, *Oration* 47 is a forensic speech by a plaintiff one of whose complaints was that his 50 fine-fleeced sheep had been stolen whilst being pastured not far from his farm near the Hippodrome just outside the urban centre. This man's strategy was clearly the production of high-quality wool, the profits from which were probably crucial, since his cash-flow was so precarious that he had recently been unable to pay a court fine of just over 1,300 drachmas because the unexpected imposition of a joint trierarchy had left him temporarily short of funds.

A second case is that of a certain Euktemon (Isaios 6.33; DAVIES, 1971: 562) whose herd of goats was probably based around his properties in the northern part of the Athenian plain at Kephisia and Athmonia. These goats, valued at his death at 1,300 drachmas, were one of the sources of income (alongside farmland, city tenements and bath houses) which had enabled him, so the speech claims, to undertake the greatest of liturgies without digging into his capital.

Thirdly, there is the case of Stratokles who for nine years had guardianship of the property bequeathed by his brother-in-law Theophon. Prominent among this property were herds of 60 sheep and 100 goats. The speaker in Isaios, *Oration* 11 (40-3; cf. DAVIES, 1971: 88) implies that the profits gained by Stratokles from the management of this estate so increased his wealth that he moved upwards into the liturgical class.

Unfortunately, although we can appreciate in general terms the profits made by owners of ovicaprines, we have no real basis for calculating exact amounts of income generated by the sale of pastoral products. The sources mention flocks of 50, 60 and 84 sheep, the last with young in addition, and herds of goats numbering 67 plus young and 100 animals respectively (Demosthenes 47.52; Isaios 11.41; Inscriptiones Graecae; 3.426, lines 58-63). These figures are difficult to exploit for a number of reasons. Some are suspiciously round, the point in the annual pastoral cycle to which they refer is unclear, we lack most of the necessary details about the precise age and sex structure of the herds and we have no contemporary Athenian prices for cheese or wool. In the absence of quantitative information we have only the qualitative evidence considered above that the sale of pastoral products could be a valuable source of income for the hard-pressed rich.

The market for pastoral products

The market for these pastoral products received a massive stimulus from contemporary political and military developments. The success of Athens' democratic imperialism in the fifth century not only led to the acquisition of vast new resources but ensured their wide distribution through a policy (MILLETT, 1989: 37-43) of underwriting the political and economic independence of poorer citizens through a variety of cash payments; and this policy was continued, and even extended, in the fourth century despite the fact that imperial resources were no longer available. Payments were made both as measures of poor relief and to encourage ordinary citizens to hold official posts, serve on the popular juries and (during the fourth century) to attend the sovereign assemblies. Much of the cash extracted from the rich to fund state warfare also went to the poor as pay for service in the fleet and for employment in the shipyards of the Peiraieus. For much of the fifth and fourth centuries Athens maintained a minimum fleet of 100 triremes on active service which. at a complement of about 170 men per trireme, would

have provided summer employment for some 17,000 poorer citizens and outsiders. Many of these men probably then gained their winter employment in shipbuilding and dry-dock maintenance work (GARLAND, 1987: 96-8). Similarly, the employment generated by the organization of state festivals meant that much of the finance provided by the rich once again benefited the urban poor.

The consequence was both a significant stimulus to citizen demographic growth and considerable long- and short-term immigration of non-Athenians taking advantage of the trading and employment opportunities of the international port and entrepot of the Peiraieus which grew phenomenally as a result of imperial control. The resident population of Attica seems to have increased dramatically from c. 120-150,000 persons around the year 480-79 to some 250,000 half a century later; or from c. 50-60 persons per square km to over 100 (GARNSEY, 1988: 90). In spite of a sharp decline during the empire's collapse at the end of the fifth century, the resident population appears to have returned to relatively high levels during the fourth century (perhaps up to some 200,000 persons). This increase was particularly marked in the urban concentrations of Athens and Peiraieus whose populations, at a conservative estimate, reached about 30,000 each at their peak (GARLAND, 1987: 58-60). The urban growth of Athens and Peiraieus supplied a sizeable market for the pastoral products of wealthy estates; and the mass of town residents were better able to afford them because they were the main beneficiaries of state payments and increased employment opportunities funded ultimately by the same rich men of whose animal products they were the consumers.

Of course the market did not consist exclusively of direct sales from farmer to consumer. A significant minority of well-to-do Athenians obtained their wealth through the ownership of slave-manned craft businesses, including those which utilized pastoral products in the manufacture of clothing. The prominent late-fifth-century politician Kleon, owner of a tanning workshop, is a case in point (DAVIES, 1971: 318-19). An episode in Xenophon's *Memorabilia* (2.7.1-13) sheds an illuminating shaft of light. Sokrates is giving advice to a certain Aristarchos, who in the disturbed conditions of the democratic counter-revolution of 403 has been burdened by having to give shelter to a number of female relatives. Deprived of access to his fields and of rent from his town houses, he is at a loss how to support them. Sokrates points inter alia to two examples of men who ran cloak-manufacturing businesses staffed by slave labour. On his advice Aristarchos borrows money to purchase wool and sets his female relatives to work making clothes with financial success. Note the unstated assumptions that wool would be readily available for purchase and that a profitable market existed for the finished products.

Neither was the urban market totally dependent upon the financial position of the less well-off. The democratic system of government with its regular assembly meetings (every nine days on average) drew many aspiring political leaders into a substantial degree of town residence. Other wealthy men followed, both citizens and resident aliens (metics), in order to be part of the elite social scene. Although a considerable proportion of such men were themselves livestock owners who were generally self-sufficient in pastoral products, the evidence of the Attic orators suggests that, quite apart from those whose property was not in land (real estate was generally forbidden to resident aliens), there were also many large landowners whose holdings appears to have maintained no livestock other than draught animals. Such wealthy men, in need of the whole range of pastoral products from clothing to items of food, no doubt formed an important element in the urban market.

Animal sacrifice and meat production

The next important question requiring discussion is that of meat production. In contrast to the modern Greek situation in which sales of animals for meat consist primarily of young males under one year, such sales in antiquity were mainly of young adults from one to three years of age. This pattern was influenced by the demands of Greek religious sacrifice and here too marketing opportunities were increased by community policy (JAMESON, 1988). The great bulk of the meat consumed by classical Greeks came via the medium of sacrifice. In most Greek states the timing and number of official sacrifices seem largely to have followed the normal seasonal availability of surplus animals from local flocks. In fifth-century Athens, following its acquisition of significant wealth independent of local agrarian resources, the official sacrificial calendar took on a life of its own. As a political act of food supply to the poor the democracy created an exceptional number of public sacrifices which must have helped to stimulate local pastoral activity.

The extreme case is that of cattle for which the scale of public sacrifice (a minimum of 2,000 animals

per year) far outstripped the numbers of surplus animals available in Attica. This overshoot was feasible because it originated at a time when many wealthy Athenians held sizeable estates in subject territories abroad from which the state's requirement for cattle could be supplied. The aptly-named island of Euboia is the most obvious nearby cattle-breeding region where rich Athenians are attested as private landowners. At attested fifth-century prices of around 50 drachmas per head, the annual state outlay will have been at least 100,000 drachmas, equivalent to the expenses of some 20-30 trierarchies. Once again state policy both benefited the poor and supplied the rich with much-needed cash.

This secure source of supply began to collapse towards the end of the fifth century. Athens began to lose her grip on her subjects from 412 onwards (Euboia was lost in 411) and the end of the empire came in 405. This development may account both for the rather higher cattle prices (90-100 drachmas) attested in the early fourth century. It is not clear to what extent the state now had to turn to non-Athenian livestock owners for its sources of supply, but a rare piece of evidence appears to record the positive response of at least one wealthy Athenian. A certain Nausikydes, the upwardly-mobile owner of a slave-run milling business, is said to have invested the profits from his business into the purchase of large herds of pigs and cattle (Xenophon, *Memorabilia* 2.7.6; cf. DAVIES, 1971: 314-15). It is probable that the cattle at least were intended for the sacrificial market. The dramatic date which Xenophon appears to give for Nausikydes' activities is the period shortly before the year 403 - the context is Sokrates' advice to Aristarchos mentioned earlier. If this can be taken as a real historical context, he may have been exploiting the seller's market which is likely to have arisen when overseas supplies of cattle were disrupted, a development which will have brought even greater incomes to those wealthy Athenians still in a position to breed the animals.

There is a limited amount of evidence from inscriptions recording the prices of other sacrificial victims purchased by official bodies (cf. JAMESON, 1988: esp. 91 & 109-10 for the following details). Prices of 5 and 7 drachmas are recorded respectively for kids and lambs, 10-17 dr. for various types of adult ovicaprines, 3 dr. for suckling pigs and 20-40 dr. for adult pigs. But these prices might of course vary considerably in times of short supply. In the year 329/8 at the end of a severe two to three year drought prices of ovicaprines rocketed by 2-3 times and cattle by 4-6 times normal attested fourth century Prices (to 30 and 400 dr.

respectively). None of this permits precise financial calculations of the profits to be made by individual owners, given our ignorance of details about the herds from which these animals came and the minute statistical sample from which some of the figures are derived. But, if we were to assume that the official annual outlay on all other victims put together was equivalent to the figure indicated above for cattle, we would be reckoning with a total income for livestock owners as a body of some 200,000 drachmas (or some 360,000 - 400,000 drachmas on the higher fourth-century figures) from sacrificial sales - only some 170 (or some 300-330) drachmas per person if shared equally among each member of the liturgical class, but equivalent in total to the costs of some 40-60 (or some 70-120) trierarchies.

Local herds of sheep and goats were generally sufficient to supply official requirements, even if in the fourth century only a small proportion of sacrificial cattle came from Athenian landowners; so it is clear that useful amounts of cash might be raised by the sale of sacrificial animals. There is, indeed, some general evidence that during our period the price of animals was rising steadily in relation to grain prices as population increase led to the expansion of agriculture and a reduction in the availability of grazing land. By the end of the fifth century the price ratio of sheep to wheat was roughly twice what it had been two centuries previously, that of cattle to wheat had risen by about 50 per cent; and the fourth century may have witnessed further increases (JAMESON, 1988: 110-11).

The market for cavalry horses

I should now like briefly to discuss one sphere in which state policy towards warfare directly affected trade in animals - namely, the Athenian cavalry (BUGH, 1988: 38-74 & 206). The newly-established, so-called "radical democracy" created Athens' first regular cavalry force of 300 horse soon after 462 and this was then expanded during the 440s and 430s to number 1,000 strong. Multiple forces were at work here. The establishment of the cavalry was designed to give the very rich an honoured role within the new democratic order and the original figure of 300 was probably a realistic estimate of the number of families with preexisting equestrian interests. The subsequent increase, however, was a more artificial measure prompted by a perception that the original size was inadequate for Athens' military needs. As a result the requirement to maintain a horse was extended to many families which had never previously kept horses. In the fourth century the situation became even more extreme. The cavalry's support for the oligarchic governments of 404/3 led the restored democracy to recruit from more loyal but less wealthy families below the ranks of the liturgical class.

Only a minority of cavalrymen could afford to breed their own horses. Most would normally purchase a horse, for which the state provided a repayable loan; this might involve an outlay of about 300 drachmas for a cheaper mount, up to 1,200 for a first-rate charger (KROLL, 1977: 89). Given a typical length of service of 10-15 years, a cavalryman might often subsequently need to purchase a replacement (without state aid), especially if his mount became unfit or injured in battle. The existence of this large cavalry force must have created a new and predictable market of up to about 100 men requiring horses around recruitment time each July. This must have meant a steady source of several hundred, if not thousand, drachmas per annum for the relatively small number of Athenian horse-breeding families, although once again part of the supply may have come from noted horse-breeding regions outside Attica.

In addition the costs of cavalry service may in themselves have drawn men from outside the liturgical class into market-oriented pastoral production. I mentioned earlier the profits made by Stratokles from the guardianship of the sheep and goats bequeathed by his brother-in-law Theophon. Why did Theophon own these animals in the first place? His property valuation of somewhat over 15,000 drachmas (Isaios 11.41) was probably insufficient to incur the burden of liturgies. He was, however, one of the cavalry commanders (phylarchos) and had purchased a fine horse for the discharge of his duties. It is tempting to conclude that his profitable herds of ovicaprines were an essential means by which he covered the expenses of his cavalry command.

Pastoral production and historical change

The trade and exchange of animals and their products discussed in this paper were part of a self-sustaining cycle of pastoral production and demand created by the financial and military policies of classical Athens. The democracy not only placed a heavy financial "tribute" upon wealthy men which impelled them into market-oriented production; its imperialist policies also led to the growth of large, prosperous urban markets for pastoral products, an exceptional religious requirement for livestock and a greater than

normal demand for horses. This self-sustaining cycle developed side by side with the growth of democracy and empire during the fifth century and probably reached its peak in the first half of the fourth century when the Athenians renewed their drive for empire without the support of reliable imperial tribute. It was the product, therefore, of a specific, and ultimately transient, historical situation. The comparatively rich evidence which we possess for the fourth century is lacking for other periods, both earlier and later; and I do not want to underestimate the normal level of trade and exchange of animals and their products in the Greek economy. But the scale of production and demand in the fifth and fourth centuries is unlikely to have been matched earlier in the pre-democratic era when levels of population and material resources were markedly lower ; and they will surely have been drastically reduced by the financial and military changes which followed the demise of democracy in 322.

We can observe the main trends of developments after 322, even if the precise consequences for pastoral exchanges are not spelled out by the sources. Within a generation the entire financial and military scene had changed (FERGUSON, 1974/1911: 55-8). The fleet, the great generator of employment, had been cut to a tenth of its final democratic size. Its diminished military role involved greatly reduced public expenditures which

obviated the need for the *eisphora*. The other forms of "tribute" extracted from the rich, the trierarchy and the festival liturgies, had been abolished; so had the distribution of that "tribute" through cash payments to poor citizens, many of whom had been disenfranchised. The size of the cavalry was cut (some time before the year 282/1) from 1,000 to 200 horse (BUGH, 1988: 184-91) and a sizeable reduction in the quantity of state sacrifices seems likely. The urban populations also declined markedly, particularly with the departure of many resident aliens in the less attractive political and economic climate (cf. GARLAND 1987: 58, on the Peiraieus).

In short, the democratic stick of financial military exactions and the carrot of state-led mass demand had drawn many wealthy men into a considerable level of market-oriented pastoral production. When the size of both stick and carrot shrivelled dramatically with the demise of imperialist democracy, the economy of the trade and exchange of animals and their products is unlikely to have remained unchanged. Important as it is, therefore, to study the direct role of animals in tribute and warfare, I hope that this discussion has shown that an examination of the impact of tribute and warfare in all their manifestations (whether involving animals directly or not) can contribute to an even more far-reaching understanding of the place of pastoral exchanges within the economic and socio-political structure.

Bibliography

BUGH, G.R. (1988): The Horsemen of Athens, Princeton University Press.

DAVIES, J.K. (1971): Athenian Propertied Families 600-300 BC, Clarendon Press, Oxford.

DAVIES, J.K. (1981): Wealth and the Power of Wealth in Classical Athens, Arno Press, New York.

FERGUSON, W.S. (1974/1911): Hellenistic Athens, Ares, Chicago, reprint of the original edition.

FINLEY, M.I. (1981/1953): Land, Debt and the Man of Property in Classical Athens, *in*: M.I. FINLEY, B.D. SHAW and R.P. SALLER eds, *Economy and Society in Classical Greece*, Chatto & Windus, London, 62-77 = *Political Science Quarterly*, 68: 249-68.

FORBES, H.A. (n.d.): The Struggle for Cash: the integrated Exploitation of the cultivated and non-cultivated Landscapes in the Southern Argolid, Peloponnesos, Greece, unpublished MS.

GARLAND, R. (1987): The Piraeus from the fifth to the first centuries BC, Duckworth, London.

GARNSEY, P.D.A. (1988): Famine and Food Supply in the Graeco-Roman world, Cambridge University Press.

HALSTEAD, P. (1987): Traditional and ancient Rural Economy in Mediterranean Europe: Plus ça change?, *Journal of Hellenic Studies*, 107: 77-87.

HODKINSON, S. (1988): Animal Husbandry in the Greek Polis, in: C.R.WHITTAKER ed., *Pastoral Economies in Classical Antiquity*, Cambridge Philological Society, Suppl. Vol., 14: 35-74.

JAMESON, M.H. (1988): Sacrifice and animal husbandry in classical Greece, *in*: C.R.WHITTAKER ed., *Pastoral Economies in Classical Antiquity*, Cambridge Philological Society, Suppl.Vol., 14: 87-119.

JORDAN, B. (1975): *The Athenian Navy in the Classical Period*, University of California Press, Berkeley & Los Angeles.

MACDOWELL, D.M. (1986): The Law of Periandros about Symmories, Classical Quarterly, 36: 438-49.

MILLETT, P. (1989): Patronage and its Avoidance in Classical Athens, in; A.WALLACE-HADRILL ed., *Patronage in Ancient Society*, Routledge, London & New York, 15-48.

OSBORNE, R. (1990): Pride and prejudice, sense and subsistence: exchange and society in the Greek city, *in*: A.WALLACE-HADRILL and J.RICH eds, *City and Country in the Ancient World*, Routledge, London.

RHODES, P.J. (1982): Problems in Athenian eisphora and liturgies, American Journal of Ancient History, 7:1-19.

THOMSEN, R. (1964): Eisphora (Humanitas III), Gyldendalske Boghandel, Copenhagen.

WHITE, K.D. (1970): Roman Farming Thames and Hudson, London and Southampton.