## FEEDING THE CITY – ATHENS 2004

## "Considerations on agricultural scale-economies in the Greco-Roman world"

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- 1. In his masterly analysis of the food supply to great antique cities such as Athens and Rome, Peter Garnsey<sup>1</sup> argued persuasively that a difference existed between a giant city such as Rome, where by Imperial times the long-distance import of basic food and other materials was totally-dominant over regional supplies, and Imperial Athens four centuries earlier, where in normal years the bulk of food for the city was available from regional surplus production (Attica), but in (frequent) years of poor local harvests, a more substantial food import was required and planned for.
- 2. This suggests an initial economy of scale, reflecting the relative size of the urban population, and its relative involvement in food production for itself in its hinterland (a large proportion of Athenian citizens, but few citizens of the city of Rome, were direct or indirect farmers of the urban hinterland).
- 3. In terms of the ancient settlement hierarchy, these imperial centres have been classed as Megalopoleis<sup>2</sup>, whose size reflects their political role as dominant over numerous other lesser urban centres and hence a multiciplicity of towns and hinterlands, as a result of which the support infrastructure for the wealth of the city depended only in part on its original and traditional urban hinterland.
- 4. In the Greco-Roman world, our sources allow us to identify, below these Megalopoleis, a wide spectrum of urban foci of varying territorial scale, and with appropriately varying number and size of dependent settlements acting as their hinterlands. It will help to try and gain some impression of the quantitative proportions we are thinking about. However, curiously, this important aspect of ancient urbanism has not been given as much attention as issues of politics and law in defining the ancient urban experience. Nonetheless, we can begin with the most intensively-investigated dataset the cities or poleis of Classical Greece. A glance at an older map still correct in its overall patterning Pounds' distribution of towns in the Roman world<sup>3</sup> strikes one

<sup>3</sup> Pounds, N. J. G. (1994). <u>An Economic History of Medieval Europe</u>. London, Longmans (Fig.1.1).

<sup>&</sup>lt;sup>1</sup> Garnsey, P. (1988). <u>Famine and Food Supply in the Graeco-Roman World</u>. Cambridge, Cambridge University Press.

<sup>&</sup>lt;sup>2</sup> Kirsten, E. (1956). <u>Die Griechische Polis als historisch-geographisches</u> <u>Problem des Mittelmeerraumes</u>. Bonn.

immediately as emphasizing the unique density of cities in southern Spain, most of peninsular Italy, and the Aegean region.

- 5. In Greece and the Aegean, Kirsten's classic investigation confounded traditional assumptions about Greek urbanism by showing that the typical polis was in effect a large village - his Dorfstaat (note 2 supra). His qualititative evaluation has since been backed by detailed quantitative research, also by German colleagues. Thus Ruschenbusch has demonstrated that the following for 'The Normal Polis': of the 700-800 minimum city-states of the Classical Aegean for which data are available, 80% have populations of 2000-4000 people, and maximal territories of 5-6 km radius<sup>4</sup>. Most recently the collective investigations of Mogens Hansen's Copenhagen Polis Project have achieved an even more exhaustive analysis of every Greek Polis recorded, but he has included Greek colonial poleis, where we know that conditions often favoured much larger territories. Nonetheless, even with the non-Aegean additions, the latest figures are that 60% of all Greek poleis have a territory of 5-6 km radius, and 80% within an 8km radius<sup>5</sup>. The first radius means about an hour's walk, the second less than two.
- 6. Detailed archaeological surface survey in the territories of Classical Greek city-states has produced a general agreement that something like 70-80% of city-state populations dwelt in towns, leaving the remainder as village or farm populations<sup>6</sup>. This imbalance of rural to urban populations, though seemingly counterintuitive if we treat the latter as supplied with food by the former, can immediately be resolved through Kirsten's model of the Dorfstaat for the Normalpolis, the majority of town-dwellers were landowners or even practical farmers commuting daily into the countryside: ancient historian Hans-Joachim Gehrke states that roughly 80% of the inhabitants in a 'Normal Greek Polis' were peasant-farmers (1986, 18)<sup>7</sup>.

<sup>5</sup> Hansen, M. H. (2004). The concept of the consumption city applied to the Greek Polis. <u>Once Again: Studies in the Ancient Greek Polis</u>. T. H. Nielsen. Stuttgart, Franz Steiner Verlag: 9-47.

<sup>6</sup> Cherry, J. F., J. C. Davis, et al., Eds. (1991). <u>Landscape Archaeology as</u> <u>Long-Term History</u>. Los Angeles, Institute of Archaeology, University of California Los Angeles; Jameson, M. H., C. N. Runnels, et al., Eds. (1994). <u>A</u> <u>Greek Countryside. The Southern Argolid from Prehistory to the Present Day</u>. Stanford, California, Stanford University Press; Bintliff, J. L. (1997). Further considerations on the population of ancient Boeotia. <u>Recent Developments in</u> <u>the History and Archaeology of Central Greece.</u> J. L. Bintliff. Oxford, Tempus Reparatum. BAR Int.Ser.666: 231-252;

<sup>&</sup>lt;sup>4</sup> Ruschenbusch, E. (1985). "Die Zahl der griechischen Staaten und Arealgrosse und Burgerzahl der 'Normalpolis'." <u>Zeits.Pap.u.Epigr.</u> 59: 253-263.

<sup>&</sup>lt;sup>7</sup> Gehrke, H.-J. (1986). <u>Jenseits von Athen und Sparta</u>. Munchen: 19.

- 7. However an additional step should be introduced here: although a typical Greek polis was dominated even in the urban centre by people whose main activity and income came from the land, the proportions of the Normalpolis territory are greater than a single town hinterland in a strict sense. I we take a region such as ancient Boeotia for example in Central Greece<sup>8</sup>, it is possible to hypothesize that the fundamental unit of settlement since the Early Iron Age was a nucleated community, or 'proto-polis', which with the rise of population in protohistoric times proliferated across the agricultural sectors of the region in modular fashion, such that each small or large village controlled some half-hour radius or 2-3km radius of landscape in its personal hinterland. However, as the Archaic era developed, the more populous or powerful of these foci expanded their control over one or more neighbouring proto-poleis, almost certainly to increase the manpower and food surpluses available to the dominant nucleation (so as to buffer poor years for local food production and enlarge the army to protect the town against equally-expansive neighbours). These processes led to the Normalpolis in Classical Greece having a territory of 5-6 km radius. thus incorporating beyond its own immediate direct farming zone the territories attached to absorped villages or small poleis.
- 8. The scale of the Normalpolis is then still small, since the farming land of the main town and of its satellite villages or small towns remains usually within 2-3km radius or some half hour travel for its predominantly town-dwelling farmers. Moreover, although the main polis now relies on the food surplusses of its satellites as much as its own personal 'chora', the journey from the outermost village or farm into the main centre, of some 5-6km, would generally be one to one and a half hours each way, favouring regular direct market supply.
- 9. There may indeed be a natural tendency for these predatory polis systems to stabilize at the point where ease of market access from rural satellites drops to a costly point: geographers argue that efficient rural marketing tends to be limited to a day-return for those bringing surplusses to the market-town or dominant centre. In good terrain this radius of some 2-3 hours each way in travel-time represents a radius of 10-15kms<sup>9</sup>.
- 10. Actually the Classical Imperial city of Athens is rather anomalous in this respect, as supposedly its large personal territory incorporated all of
- <sup>8</sup> Bintliff, J. L. (1994). Territorial behaviour and the natural history of the Greek polis. <u>Stuttgarter Kolloquium zur Historischen Geographie des</u> <u>Altertums, 4</u>. E.Olshausen and H.Sonnabend. Amsterdam, Hakkert Verlag: 207-249, Plates 19-73. Bintliff, J. (1999). The origins and nature of the Greek city-state and its significance for world settlement history. <u>Les Princes de la Protohistoire et l'Emergence de l'Etat</u>. P. Ruby. Rome, Ecole Francaise de Rome: 43-56.
- <sup>9</sup> Bintliff, J. (2002). Going to market in antiquity. <u>Zu Wasser und zu Land,</u> <u>Stuttgarter Kolloquium 7</u>. E. Olshausen and H. Sonnabend. Stuttgart, Franz Steiner:: 209-250.

Attica, far larger than could be encompassed in a 2-3 hour marketing radius. If, as Garnsey has suggested, it nonetheless was reliant for more than half of its normal food needs on the surplusses of the Attic countryside, then we might require some unique mechanisms to ensure that supply, stretching the typical marketing parameters observed in cross-cultural studies. Firstly, of course, we have already noted that the city did count on long-distance imports of food in every year, and increased this irregularly to allow for variable local yields in its own territory. Secondly, it can be suggested that the blanket term 'deme' for the more than a hundred rural satellites of Athens is misleadingly translated as 'village-hamlet', when there probably existed a wide spectrum of satellites ranging from tiny foci to town-like nucleations (those where archaeology or the councillor quotas indicate major settlements)<sup>10</sup>. One can suppose that the larger, town-like rural satellites acted as market foci in their own districts, but could forward some surpluses too to the polis centre at Athens. Then it is generally agreed that although Athens was a large city, in high-Classical times the majority of its citizens actually lived in its territory, in those demes, thus reducing the amount of food being moved from its hinterland to the urban focus. As for the surpluses that nonetheless were brought to Athens itself, Hans Lohmann has highlighted the existence of wellconstructed network of roads in Attica allowing exactly this kind of frequent movement of people and goods from hinterland to town<sup>11</sup>. The special attraction and presumably inflated prices for rural goods that could be achieved in Athens must be responsible for ancient references to Boeotias peasants (the next region north of Attica) bringing food to the city. But I suspect that distance constraints were sufficient to encourage a special form of land utilisation in the immediate access zone to the city, where market-returns were always achievable: the patterning of satellite demes is remarkably dense in the zone of Attica immediately around the city itself - the Asty region (see Note 7 supra). Whereas the demes further out form a network of characteristic 2-3km radius territories, conforming to typical mixed farming landscapes, those in the Asty district are more like 1-2km radius, and I suspect their inhabitants specialized in intensive marketgardening primarily for supplying the urban market of Athens.

11. Thus far we have focussed on the food supply of Classical cities in the Classical Greek Aegean, and argued for a sliding-scale of town size, territory size, and expanding dependence on absorbed contiguous territories and then imports from distant food sources. I believe it possible to transfer this model to other parts of the ancient

<sup>&</sup>lt;sup>10</sup> Lohmann, H. (1995). Die Chora Athens im 4. Jahrhundert v. Chr. In: W. Eder (Ed.) <u>Die athenischen Demokratie im 4. Jahrhundert v. Chr.</u> Stuttgart, Franz Steiner Verlag: 515-548.

<sup>&</sup>lt;sup>11</sup> Lohmann, H. (1992). Agriculture and country life in Classical Attica. <u>Agriculture in Ancient Greece</u>. B. Wells. Stockholm, Paul Astroms Forlag: 29-60.

Mediterranean<sup>12</sup>. In Pounds' impressionistic map of Greco-Roman cities, we recall that two other regions displayed the same high density of towns – Italy and Southern Spain (with a highly-localised parallel in French Provence-Languedoc). In both, as in Greece, urban development had commenced in Iron Age and protohistoric times indigenously, a trend enhanced by the settling of Phoenician and Greek colonies on their coasts. As in Greece, a multiplicity of local nucleated centres vied for their own autonomy and control over each other, with the result that gradually dominant centres absorbed lesser while generally keeping them in place as 'feeder-satellites'. And likewise, I think we can suppose that the same kind of sliding-scale of food supply from nearer or farther sources will have operated, up to the level of occasional megalopoleis where long-distance food imports would have become a significant if probably minor requirement.

- 12.1 am not aware, though, of comparable analyses of the urban-rural population split, or of the proportion of landowners and practical commuting farmers, in the towns of the Central to West Mediterranean. It seems to be assumed that the town-dwellers were in a minority, and within them so were the farmers, but on the basis of the Greek analyses one must question if this is actually correct!
- 13. Finally one may comment briefly on the food supply and marketing of rural products in those large zones of Pounds' map of the Greco-Roman world, where cities are rarer and further apart. This was indeed the focus of a fine study by Bekker-Nielsen, at least as regards the Western Provinces of the Roman Empire<sup>13</sup>. The author divided the Centre and West Empire into zones where a characteristic density of towns could be found, from the highly dense Italy into the lowest density of Northern Gaul and remoter parts of Iberia. In line with our analysis here, it was suggested that dense urban networks were highly locally embedded as district marketing, social and population foci, whilst the widely-dispersed towns of the youngest Roman provinces were too far apart to be effective economic and market centres and were essentially political, administrative and strategic foci. In a comparable fashion, Kunow <sup>14</sup> argued that one could identify in Roman Germany a road network which had arisen for administrative and strategic purposes rather than to assist regional marketing, reflecting the low development of productive rural estate and of district market nucleations which they might supply.

<sup>14</sup> Kunow, J. (1988). "Zentrale Orte in der Germania Inferior." <u>Archaeologisches Korrespondenzblatt</u> **18**: 55-67.

<sup>&</sup>lt;sup>12</sup> Cf. Bintliff, J. (2002). Rethinking early Mediterranean urbanism. <u>Mauerschau, Bd. 1. Festschrift fuer Manfred Korfmann</u>. R. Aslan et al. Tuebingen, Verlag Bernhard Albert Greiner: 153-177.

<sup>&</sup>lt;sup>13</sup> Bekker-Nielsen, T. (1989). <u>The Geography of Power</u>. Oxford, Tempus Reparatum.

14. If large regions of the Roman Empire initially lacked a regular series of population nucleations which were at least in a significant part supplied by a dependent hinterland, the requirement for the populations of the Early Empire to sell on the market in order to gain money for taxation, and the related desire on the part of those populations to purchase commercial goods and luxuries made available through Romanisation and enhance trade and production systems, would surely have called into existence a regular series of district market foci. And indeed the archaeological data strongly support this scenario, with the widespread development throughout the previously underurbanised provinces of small centres. The fact that most did not achieve legal and political status as 'towns' need not prevent us from perceiving their functional role as service-centres for district rural populations, and their scale commonly conforms to the requirements of easy day-return access<sup>15</sup>.

<sup>&</sup>lt;sup>15</sup> Brown, A. E., Ed. (1995). <u>Roman Small Towns in Eastern England and</u> <u>Beyond</u>. Oxford, Oxbow Books; Bintliff, J. (2002). Note 9 supra.