The Voice of the Silent Majority: Archaeological Surveys and the History of the Roman Countryside

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The Roman Empire was and is a remarkable achievement in world history. At the height of its power it had a population that has been variously estimated at 60 to 100 million inhabitants, more than Han China at the time, and more than any Empire that had come before it. The Empire stretched from the bleak North of England to the Syrian Desert, and from Western Morocco to the Danube. For a while, population densities in many of the core regions were higher than ever before, and higher than they would be for a long time after. In addition, for a preindustrial society a remarkably high proportion of these people lived in cities, and often in really large cities.[1]

And yet, this was and remained an agricultural economy, where agriculture represented perhaps two thirds of GDP, and where 80% or more of the population lived in the countryside and worked in agriculture. For all its potential achievements, the Roman economy was not a modern economy.

Those modern economies are characterized by sustained real growth of per capita incomes of at least 1% per year, and often more. Aggregate growth is usually even rather more, because modern societies also experienced significant population increases. By contrast, preindustrial economies are characterized by only low per capita growth at best. In fact, the most common pattern is that of a negative correlation between trends in population and trends in incomes. Income growth could often not keep up with population growth. Periods of population growth experienced declining labour incomes, until Malthusian positive checks would turn the tide with wars, epidemics and famines.[2] After such periods of catastrophic mortality, labour would become scarce and hence was only used where its marginal productivity was highest. Therefore, after demographic crises labour incomes would be rather higher, as was most clearly demonstrated after the Black Death of the 14th century.[3] Conversely, land had become relatively more abundant, so land values and rents were lower. Between them, these two developments of higher wages and lower rents reduced income inequality between workers and landowners.

Historical reconstructions of the medieval and early modern rural economy have thus moved between concerns about historical change on the one hand, and the strength of a Malthusian ceiling on the other hand.[4] The preindustrial economy was by no means static, but could it also escape from its Malthusian constraints, and experience real economic growth where both population and standard of living would increase? The logic of the pessimistic Malthusian model is impeccable, and there is historical corroboration from mediaeval and early modern European history. At the same time at least the early modern Netherlands and England experienced both population growth and improving

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standards of living.[5] So we must ask ourselves what scenario applied to the Roman experience. Can survey archaeology contribute to an answer?

The first central variable for such analysis is of course population, as it is the numerator in many equations. What was the trend in aggregate population numbers, was it the same all over the Empire, and how can we know this? Until quite recently discussion of such population trends was mostly concerned with competing interpretations of the census numbers for Republican Italy. Unfortunately, these census figures only exist for two centuries, and only for Italy. To make matters worse, there is significant scholarly disagreement about who were counted in these censuses.[6] Therefore, in my view the census numbers are not very helpful.[7] A recent alternative has been to use field survey data to reconstruct rural population trends. Lisa Fentress' pioneering work has shown that by assigning estimated population numbers to the different site types we can estimate total population for a region. Absolute numbers are inevitably quite insecure, but relative changes over time should be far more robust. At this moment, reconstructions of long term demographic trends from survey data are still few in number, particularly outside Italy. However, a tentative hypothesis may be formulated that population in Italy increased during the later Republican period, and started to decline again quite dramatically from perhaps the later 2nd century AD, even if regional differences in magnitude and timing are important, and deserve concerted investigation.[8]

Beyond trends in population, such analyses from settlement data can also show changes in the relative proportions of people on small versus large estates and social relations in the countryside. Therefore, such data are directly relevant for classic and important debates about the decline of the small farmer in Italy in the later Republic, or the growth of large estates in Late Antiquity. Theoretically, a growth in population in the earlier period should have depressed marginal labour productivity and hence labour incomes and improved the marginal productivity of the land and hence increased land prices and rents. Socially, the most likely result would be a decline of the small peasant and the growth of large estates. And indeed, this is of course the traditional narrative, even if the explanation is usually an entirely different one, and based on a presumed decline in population rather than on demographic pressure, and connected to the rise of slavery in agriculture and the migration of impoverished peasants to the city and to Rome in particular.[9] However, *ceteris paribus* such demographic contraction should have improved labour productivity and labour incomes, and should have depressed rents and hence elite incomes. In short, the traditional interpretations of late Republican and late Imperial economy and society do not sit easily with the standard economic analysis of the consequences of changes in factor proportions by shifts along the production function.

This is not to say that such an alternative non-Malthusian scenario is impossible, but it would imply that rather than a shift along the production function, there was a shift of the production function itself, where the same quantities of factors of produc-

tion produced more or less than before (i.e. real growth and decline). So what actually happened, and can survey archaeology help? For Italy, the archaeological picture seems to be quite clear that there was population growth and urban growth in the Republican period and that there was a growth of, first, larger farms and later really large estates.[10] At the same time, however, the new picture that has emerged from survey archaeology is that in many areas the small farmer continued to be a major part of the rural landscape. The literary picture of a landscape devoid of small farmers and dominated by large estates worked only by slaves is a misleading one. Villa agriculture came on top of continued peasant farming.

Explanations for this growth in population have shifted in recent years. When originally this was viewed as part of Roman military expansion, Terrenato and others have demonstrated that the same expansion occurred not just in Roman controlled territory, but also outside the sphere of Roman influence, or before Roman conquest. It would seem to be part of a much wider Mediterranean phenomenon, of which Roman demographic expansion itself was a product rather than a cause.[11] If demographic expansion and urbanization were part of a Mediterranean-wide process, trade and market integration become an important vector for convergence and regional connectivity. And indeed, the penetration of long-distance trade beyond urban centres and into the countryside has become an important issue.[12] Here, archaeological surveys have a lot to contribute. What is also remarkable is the greater reach of long distance trade, into, for example the Red Sea and the Indian Ocean, or along the African Coast.[13] Some have even suggested tentatively that the convergence of many such trends may have been part of a global development that also included, for example, Han China, and that owed much to a period of increasingly favourable climate.[14]

Similar issues emerge when we ponder the causes and consequences of the late antique demographic contraction. Again, assuming for the moment that there was indeed such a contraction, the *ceteris paribus* prediction would be that marginal labour productivity increased and hence labour incomes, and that the marginal productivity of the land deteriorated, and that hence rents declined. Therefore, the model predicts that small farmers would do better, and that big landowners would see their position eroded. Late antiquity should be a world of happy and prosperous peasant farmers, and lower rent income for the landowning elite. Again, the question remains, if this is what happened; it certainly deviates from the quite commonly held view that labour in late antiquity became increasingly oppressed, and that big magnates and their large estates became more prominent.

And indeed, the late antique transformation does involve discussions of demographic contraction, urban decline, rural social change and new productive strategies, but also of stagnation in shipping and long distance trade, and a return to more local wares.[15] An explanation of why this contraction did not benefit labour incomes would then have to come from three potential developments. The first is a shift of the production function because of unfavourable climate change: the same quantities of land and labour

produced less. The second would be that urban decline reduced the beneficial division of labour between town and country, and reduced the potential for profitable market crops.[16] The third would be the growth of oppression to counter the forces of the labour market.[17]

Survey archaeology can contribute a lot to all of these important questions. Assuming that the hypothesis of demographic growth and subsequent contraction is indeed confirmed, we want to know if this population growth did indeed depress the standard of living and if the decline of late antique population improved the standard of living. Alternatively, did Roman population grow because of increased prosperity, and declined because of increased poverty (i.e. that there was indeed a shift of the production function itself)? To put it another way, was the standard of living the dependent variable or the independent variable? And, of course, there is the empirical question how we can reconstruct such changes in standard of living. So, what was the ratio between estimated population numbers and quantities of artefacts of various types, and how did this change over time? Here, so-called high income elasticity goods have a central place, which are goods that are in disproportionally greater demand if incomes rise (and disproportionally less when incomes decline). When incomes rise, people will not increase their consumption of subsistence (low income elasticity) foods by much, if at all (in fact, they may even reduce their consumption of such goods). They will spend the extra income on more luxurious (high income elasticity) foods such as meat or fruits, and the better and more expensive consumer goods such as fine table ware. Therefore, increases in the per capita consumption of high income elasticity goods are an excellent tracer of increases in incomes, even if we do not have direct evidence for incomes. Archaeologically, such consumer spending can be quite visible, in terms of volume, but also in terms of changing proportions of (low income elasticity) coarse ware versus (high income elasticity) fine ware. The same is true for changes over time in the proportion between local wares and imported wares: what does that tell us about purchasing power, but also about market integration and cultural identity?

Yet, for all the optimism about the analytical potential of archaeological surveys, it is important to realize its current limitations as well. The first of these is that the relation between what we find on the surface and what was really underneath can be quite surprising. In particular, what may seem to be surface traces of a farm may well turn out to be something quite different once we actually excavate. Here, the Roman Peasant Project has been a pioneering contribution that deserves to be followed by many more such projects.[18] Methodologically, all locations on the spectrum of extensive survey to intensive survey, to hyper-intensive survey and geophysics, and all the way to small actual excavations deserve to be represented and strategically combined if we want to get maximum information and understanding from a minimum of effort.

A second area where much more is possible is showcased here in the archaeobotanical paper by Mercuri et al. We should never forget that agriculture was the principal rural economic activity; by and large archaeobotany and archaeozoology are the prin-

cipal tools to retrieve data on that, and to reconstruct shifts in agricultural strategies to respond to changing circumstances.[19]

A third area is that of obstacles to generalization. By now we have quite a few survey datasets for Italy, and also for some other regions of the Empire. Unfortunately little has been done to integrate the results of these many surveys. Often, archaeologists have insisted on the uniqueness of their own survey, and explanations were often based on the unique local geography. Generalization was usually avoided, and was not made any easier because projects insisted on their own superior methodologies, and kept the underlying datasets inaccessible to other researchers. As a result, the potential of these massive datasets was rarely used in larger historical reconstructions. When they were used, this had to be done with analyses that could not be based on the underlying data.[20] Collins-Elliot (this volume) proposes one – mathematical – way to analyse these data on a more aggregate level. Alternatively, the recent Roman Hinterland Project, integrating the three major survey datasets around the city of Rome, is a first example of what can be achieved when teams join forces and homogenize and integrate their datasets.[21] It allows for far more secure identification of the major trends, but also for more secure identification of local deviations from that trend. We can only know what is specific to the local, and why, if we can compare it to the global.[22]

In conclusion, I would argue that the big story of Roman economic and social change is not only one of its fascinating urban economy, but also that of rural population, production, standard of living and social relations. Survey archaeology is our best bet to study these developments, but all the more so if we make some important strategic decisions to get as much out of these data as we can, to write local histories, but also to write the big story of the Empire at large. Finally, to understand the meaning of what we observe, we need to be aware of the economic logic of the situation, and join the comparative historical debates of pre-industrial economies and societies. The Roman case is almost uniquely interesting for its achievements and ultimate failure.

Notes

[1] Hanson 2016.

[2] Jongman 2012; 2014.

[3] Campbell 2016.

[4] Clark 2007.

[5] De Vries – Van der Woude 1997; Broadberry et al. 2015.

[6] Scheidel 2007.

[7] Jongman 2009.

[8] Launaro 2011; Fentress 2009; De Haas et al. 2011; Jongman 2009.

[9] Hopkins 1978.

[10] e.g. Carandini et al. 2002; Terrenato 2012; De Haas et al. 2011.

[11] Terrenato 2012; Launaro 2011; Knust this volume.
[12] Launaro this volume; Schörner and Schreck this volume.
[13] Nappo 2018.
[14] Knust, this volume; Jongman 2012; Jongman 2014.
[15] Duncan-Jones 2004; Harper 2016.
[16] Jongman 2016.
[17] Jongman 2014; c.f. Brenner 1976; Borsch 2005; Acemoglu – Robinson 2012.
[18] Bowes et al. 2011.
[19] Bowes et al. 2017.
[20] Ikeguchi 2007; Launaro 2011.
[21] Attema et al. this volume.
[22] Knust, this volume.

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