GRAVEYARDS FOR ROME. MIGRATION TO THE CITY OF ROME IN THE FIRST TWO CENTURIES A.D.¹

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‘[I]t is tempting to speculate, as several ancient historians have, that in terms of mortality, early modern cities may profitably be compared with republican Rome: that the high-risk urban environment dominated the demographic experiences of the citizens making them comparable despite the intervening 1,500 years’.²

‘As always in good history there is no law.’³

Introduction

To analyse the relation between migration and urbanisation in the Roman world is both difficult and interesting. On general grounds it is likely that levels of Roman mobility were high. On the other hand, the sources to study such mobility are fragmentary and even to the generally lax standards of ancient historians highly problematic. Comparative evidence from other periods plays a difficult role. It is precisely because scholars have increasingly realised that pre-industrial levels of mobility could be very high that Roman historians are becoming aware of the possibility of substantial mobility. But claims for the Roman world solely based on arbitrary selections of comparative evidence can hardly convince. There is a clear need for models to understand Roman migration: the disparate ancient sources desperately need a framework.

One such model is available: that of urban graveyards. In its classic formulation, urban populations were unable to reproduce themselves because of very high levels of urban mortality. If cities were to remain at a stable size or were to grow, they had to be supplied from the outside, by migrants.

The urban graveyard theory has been applied by a number of ancient historians, in particular with reference to the city of Rome during the later Republic, when Rome’s population is thought to have grown from some 200,000 to 1 million inhabitants. In this paper, I would like to take a closer look at the applicability of the theory for the city of Rome during the period of the Principate and at the same time address the question to what extent the theory helps to understand urban migration in a more general sense. What interests me in particular is the logic of the argumentation and the methodology employed.

1. Theories of Urban Migration

¹ ESSHC draft as of 14-2-08; a shortened version will be presented at the conference. Not to be cited in printed form without permission of the author. I have refrained from extensive annotation; the reader is referred to the bibliography instead.
³ Van der Woude (1982) 74.
The classic version of the urban graveyard theory is best known from an important article of A.E. Wrigley published in 1967, where he formulated a model to understand the characteristics of the spectacular and exceptional growth of London between 1650 and 1750. At the basis of Wrigley’s model were differences in rural and urban mortality: although variations occurred over time, the crude death rate in London was significantly higher than in the countryside. But despite London’s natural decrease, the city grew at a spectacular rate. The only possible explanation was that the very high urban mortality was compensated by even higher levels of immigration.

It is important to emphasise that the urban graveyard theory is based on two arguments, not one. Firstly, it postulates urban natural decrease: within the city death rates are higher than birth rates, due to which the population would contract without external supply. Secondly, there exists differential mortality between city and countryside: rural levels of mortality are lower than in the city. Urban growth can occur in situations where there is a surplus of births in the countryside that can be siphoned off to the city, and where this surplus exceeds the urban birth deficit. It is relative rather than absolute levels of mortality that are important. A third important element in the theory is that mortality is density-dependent: as levels of pre-industrial mortality were mainly determined by the spread of diseases, one of the major factors influencing levels of mortality was how close people lived to each other.

The theory of urban natural decrease has found application far beyond London – in fact it has been applied to the whole urban landscape of late Early Modern Europe. But is it justified to speak of a law, and if so, how universal is it? It is obvious that its applicability is limited to the pre-industrial period, for with the onset of industrialisation the relationship was reversed, and cities began to experience urban natural increase. Secondly, even within Early Modern Europe a number of cases have been found where the model does not apply because the urban natural population grew. Thirdly, it has been argued that in the preceding period the situation might have been different as well: at least some cities might have been capable of urban natural increase. Fourthly, with regard to its applicability outside Europe, Woods (2003) has pointed out that some evidence for differences between urban and rural mortality from East Asia is in fact equivocal.

A major attempt at revision of the theory was made by Sharlin in 1978. Sharlin did not deny the ‘overwhelming importance of migration’ for urban growth, but reversed the underlying causative mechanism. According to him the key lies in fertility, not mortality. He distinguished between two groups: a resident core population and an envelop of temporary migrants. The core population might be said to have had normal demographic characteristics: among them, no excess mortality occurred, and even some slight population growth might have been possible. The migrants, by contrast, had a very different demographic profile: they consisted of young men and women who were hindered by institutional barriers to marry. In consequence, their fertility lagged behind. Migrants offered therefore their fair share to levels mortality, but hardly contributed to fertility. Paradoxically, cities were able to grow thanks to the influx of migrants, but at the same time the migrants also produced a much higher level of urban mortality. Migrants were therefore both cause and solution to the problem of apparent population decrease.

In all subsequent literature Sharlin’s article has been presented as a turning-point in the debate. But the debate itself is unresolved. Whereas both theories present internally consistent models, the problem is that empirical data to verify (or falsify) either theory are lacking. There are a number of problems. Firstly, there is no doubt that urban mortality levels could be very high. But this does not mean that they could not be compensated by even higher levels of fertility. Secondly, it is possible that the distinction made by Sharlin between the mortality of the immigrant population and the core population is in reality rather a difference in mortality
levels between different classes, with the poor having the highest levels of mortality. Thirdly, it is difficult to distinguish in the data between permanent residents and temporary migrants; even Sharlin himself had to use proxy data to make his argument. As migrants form by their very nature a very volatile group, it is unlikely that the required data ever surface.

The relationship between the two theories is debated. Although Sharlin attempted to replace the traditional theory with his own, the models seem not mutually exclusive. Galley (1995) has produced an argument for the applicability of both, though not simultaneously. On the basis of evidence of 16th and 17th century York, he adds one important ingredient to the models: the functioning of the urban economy. It is the interplay between the economy, migration and variations between fertility and mortality that is important. Changes in population size were not due to changes in mortality but to changes in fertility. The extent to which migrants moved to the city and the extent to which they would be able to settle (i.e. marry) depended on the state of the economy.

Migration is central to the theories, but in a different vein in each case. In the urban graveyard theory, migration is the product of a calculation and in itself not very interesting. It is urban growth that matters. Sharlin’s attempt at revision had one important effect: it turned the focus on the migrants themselves. Sharlin’s theory dissects the population into two groups, with different characteristics. It was the migrant’s composition in terms of age and gender, their demographic behaviour (marriage and fertility) and the social institutions preventing marriage which were central.

The role accorded to migration is large, but that does not answer the question to what extent the theories actually help to analyze migration. In that respect it is striking – especially to an outsider – how little migration historians have been interested in the theory. The basic objection seems to be that the theory offers only a partial discussion of immigration, and leaves out urban emigration altogether. Real migration streams might have been several times the net migration streams postulated by the theory. The focus on net migration of a more permanent character obscures both qualitative and quantitative appreciations of migration.

In that respect, we might bring two of Ravenstein’s classic migration laws back into the discussion. One stipulates that most migration is step-wise. Peasants are not going directly to a large city, but move to small cities in the neighbourhood. If applicable, the idea that the urban graveyard-effect leads to streams of rural-urban migration might be misleading. Another of Ravenstein’s laws stipulates that for every stream of immigration, a counter-stream comes into existence. This would mean that in the calculations a significant discrepancy between net streams and real streams of migration might exist.

In applying the urban graveyard theory to the Roman world, several points are to be taken into account. To begin with, it is important to realise that there are two main theories, not one. Secondly, there is an ongoing debate about their applicability. For the Roman world, urban natural decrease is not to be taken for granted, because it can hardly be considered a universal property of all pre-industrial cities. Thirdly, as Sharlin’s discussion has shown, levels of urban fertility should also be discussed – establishing high levels of mortality is not enough. With regard to fertility, there may have existed differences in fertility regimes between a core population and an envelop. Fourthly, the state of the urban economy may have altered the labour market and affected demand for migrants. Lastly, the contribution of the theory to the whole spectrum of migration practices should be considered.

2. Applications to the Roman world

The urban graveyard theory is well known among Roman historians and has been repeatedly used. Wrigley’s model was introduced into ancient history by Hopkins, and more extensive
discussions have been offered by Jongman and Morley, who have applied the urban graveyard theory to late republican Rome and the cities of Italy. Scheidel has made important qualifications to their calculations, whereas Lo Cascio has raised some important objections against its applicability and substituted his own revisionist version, based on Sharlin’s alternative version. Let me state from the outset that I have no intention to criticise their work in detail, and that I find many of the arguments employed by them convincing on general grounds. I am rather more concerned with (or about) the logic of the methodology employed. There are several causes for worry.

To start with, the applications have been one-sided. With the notable exception of Lo Cascio, ancient historians have mainly confined themselves to the application of Wrigley’s model for London to Republican Rome. The reason for the use of Wrigley’s model is not difficult to see. Not only was the parallel between the growth of London and the growth of Republican Rome difficult to miss, but it was also the coherence and simplicity of Wrigley’s model that has made it so attractive. In many, though not all, applications, the subsequent debate has been downplayed or even ignored. Sharlin’s analysis usually receives short shrift – a passing reference as an alternative of no real value. If Sharlin’s model is applied at all (as by Lo Cascio), it is his distinction of an urban population into a core and an envelope rather than fertility itself that has attracted most attention.

It should also be noted that within the application of the urban graveyard theory, ancient historians have mainly legitimised its application by pointing to the very high levels of urban mortality in the city of Rome. Although this is certainly an important part of the theory, high mortality is not a sufficient condition.

Next, quantification plays a remarkable role. There is an inherent difficult in the application of the theory to the Roman world. The theory is a demographic one, based on empirical observations about specific cities in specific periods of early modern Europe. For the Roman world there are no empirical data available, but this has not deterred scholars from offering calculations. These calculations are presented as ‘reasonable’ (and they might well be), but this usually means that Wrigley’s figures of the London birth deficit are simply transferred to Republican Rome.

There might also be another problem, and that is that applications of the urban graveyard theory are based on a negative evaluation of urban life. As embodiment of the city par excellence, Rome attracted both praise and invective. In applying the urban migration theory, it is tempting to privilege the negative statements and present them as fact. Can we select some of Juvenal’s negative statements about urban life simply because they match with what we think?

All these sources of worry do not necessarily suggest that the application of the theory is not warranted. But the risks of borrowing concepts from other scholarly disciplines is clearly shown. De Vries has warned against the risk of applying a ‘mechanistic “law” based on assumed “natural” conditions’ (De Vries (1984) 183), and it is hard to avoid the impression that this is precisely what has happened in the application to the Roman world. Let us therefore take a closer look at the factors relevant to its application.

3. Rome’s population

Applications of the urban migration theory for the Roman world start with the size and composition of the urban population. In the theory of urban natural decrease, size functions as an indirect indicator of population density, and density forms an index of levels of mortality. Size therefore determines to what extent the urban graveyard effect applies. In Sharlin’s
migration theory, it is not so much the size of the urban population itself, but its composition
that is of importance, especially the balance between home-born residents and migrants.
It is well known that the population of Rome is traditionally estimated at 1,000,000
inhabitants around the reign of Augustus. Although the general order of magnitude is not in
doubt, it hardly needs to be emphasized that there are immense uncertainties about the
particulars. The figure is based on attested numbers of recipients of the grain-dole and cash-
handouts. A multiplier is used to obtain the families, and then additions are made to take the
groups into account that were excluded from the dole. The uncertainties concern the question
which groups did receive grain, who were excluded, and in what numbers.
The figure of 1 million is used to legitimise the application of the urban graveyard theory.
A city that large simply cannot escape from its effects. However, the relation with
comparative evidence of pre-industrial Europe is difficult, for we simultaneously use the
figure to claim a unique position for Rome in comparison to the cities of early modern
Europe.
The calculation itself is also interesting. The calculations are based on a distinction
between a core of grain receiving families and a remainder of the population that was
excluded from the dole. Some ancient historians have readily seized upon this distinction in
order to apply Sharlin’s model of a home-born core population and a transient and volatile
population of migrants. The equation is tempting, but only partly justified. A part of the free
foreigners will no doubt have consisted of recent migrants. But the category of peregrini will
also have comprised many alien residents who might have lived in Rome for many
generations. With respect to the slaves, it should not be forgotten that in the Principate many
(according to some scholars, most) of the slaves were home-bred.

We can also turn the question around, and ask who were the immigrants that came to
Rome in the Principate. Their origins were mixed. To the extent that slaves were not
homebred, they will have come from all over the empire, and sometimes even outside it. Free
migrants will also have come from all over the empire. But it is certainly conceivable that
during the Principate many Italians kept moving to the city. They might have been free
peasants, but also inhabitants of other Italian cities. What is important for the application of
Sharlin’s model is that the age structure and sex ratio of the migrants will have differed
significantly from that of the home-born population. It is difficult to draw any conclusions
about the migrant slaves, but in the case of the free population it is very likely that the
migrants were predominantly young males.
Thus, the size and composition of the population of Rome have played a large role in the
application of the theory, but they create difficulties of their own. The size has been used to
legitimize the application of the graveyard theory; but at the same time been used to claim
Rome’s uniqueness. Its composition has been used to distinguish between a resident core and
a more unstable envelop. Although such a distinction is certainly useful, it cannot be based on
the calculation for Rome’s population size.

4. Urban mortality

Mortality should be discussed next. Obviously, mortality is crucial for the urban graveyard
theory in its classic form. For Sharlin’s model, on the other hand, mortality is of less interest.
Urban excess mortality is not the product of a different mortality regime, but of a skewed age
composition and below-average fertility of migrants.
Proponents of the urban graveyard postulate very high levels of urban mortality in Rome.
In the absence of empirical data they make their case by pointing to the low standards of
hygiene and sanitation, to the bad standards of housing and to the occurrence of several diseases. The picture they paint is a grim one.

Even apart from the fact that such pictures can only be suggestive and cannot establish exact levels of mortality, there are three problems with this line of argument. Firstly, the question remains which yardstick we use. Was life in Rome that bad to pre-industrial standards? Secondly, the levels of life expectancy imputed for the Roman Empire are already extremely low, much below those that are found in well-documented societies. They are based on mortality tables that are not attested empirically. The assumption that mortality in Rome was even lower, places the demographic regime at the very bottom of what was demographically possible. Thirdly, the inquiry is to some extent misleading, for it is not high mortality itself that is important, but the differences in mortality between Rome and elsewhere.

There is a way out, I believe. The crucial point is not housing, sanitation, or disease, but simply urban density. If the Augustan population figure of 1,000,000 is even roughly correct, the density of habitation of Rome was not only very high, but also differed significantly from that elsewhere. If we assume a strong correlation between density and the spread of disease, and hence between density and mortality, the Augustan population figure strongly suggests differences in mortality between Rome and the rest of the Roman world.

Discussions of sanitation, disease and housing suggest that urban mortality levels were high. But this is not sufficient for the model to apply. It is rather differential mortality that is important. An indirect indication is offered through density: if the Augustan population size is even roughly correct, urban density was much higher than anywhere else. Quite interestingly, it turns out to be easier to make the case for differential mortality than to make the one for high mortality.

5. Marriage and fertility

Marriage and fertility should also be discussed – if only because they have received little attention in the applications of the urban graveyard theory to the Roman world. As with mortality, marriage and fertility play a different role in each model. In Wrigley’s model, the extraordinarily high levels of urban mortality are the factor that causes rural – urban migration. There is however one important condition that should be met, and that is that the high levels of mortality are not compensated by equally high levels of fertility. In Sharlin’s model, there are differences in the level of fertility between the resident core population and the migrant population. The key for these lower levels of fertility lies in institutional mechanisms preventing marriage among immigrants. Is there evidence for relatively high levels of fertility among the urban population? Or should we posit a separate fertility regime for the immigrant population, with lower incidence of marriage?

The answer to the first question is on general grounds negative. General fertility (or that of a core population) is unlikely to have compensated the high levels of urban mortality. Famously, the Augustan marriage laws show a reluctance to marry among the elite. What happened to the rest of the urban population is difficult to say, but little points to very high levels of fertility. Brunt made an argument that poverty led to lower fertility in the Republic, but although this may seem intuitively acceptable, the relation between poverty and fertility has been shown to be complex, and it is clear that poverty does not necessarily lead to smaller families. But arguments favouring a really high level of fertility among the urban poor are absent. Given the postulate that mortality was extremely high, and lack of evidence for increased fertility, the likelihood that mortality was compensated is very slight.
The answer to the second question is likely to be positive. Although the argument is both crude and complex, migrant fertility was almost certainly below average. It is certainly conceivable that levels of fertility among slaves were relatively high. In the prevailing system of slave breeding, there existed a clear relation between fertility and manumission: manumitted slaves compensated their owners with new slaves – their own children. But the argument for relatively high levels of slave fertility rests on the assumption that the slaves are Rome-born. Higher fertility should not be considered a property of the unfree immigrant population.

The fertility of free migrants was almost certainly lower. If free migrants consisted mainly of young men, the sex-ratio of the city’s population would be very skewed. The marriage market of Rome is almost impossible to analyse, and the idea that marriage was universal needs closer scrutiny, especially with respect to the remarriage of widowed women. Be that as it may, either we postulate substantial return migration of men seeking brides in their places of origin, or we postulate a rather cramped urban marriage market leading to substantial delays in marriage of migrants. The result is the same: lower levels of fertility among urban migrants.

Although there are many uncertainties, the logic of the argument is important. It is certainly possible that slave fertility was relatively high, but that is to a large extent a function of slave-breeding. This means that this postulated higher slave fertility should not be considered a property of the immigrant population. Free migrants, on the other hand, are likely to have had a lower fertility. It seems therefore likely that Sharlin’s scenario does apply to the case of Rome. It does however also imply that the distinction between core and envelop should be conceived differently from that that has been assumed: slaves belonged to the former, not to the latter. At the same time, the likelihood that high urban mortality was compensated by equally high levels of fertility is slight. In combination with the indirect evidence for differential mortality, this suggests that the urban graveyard theory in its classic form also applied.

6. Modelling Roman Migration

It therefore seems possible that both Wrigley’s and Sharlin’s model apply to the case of Rome. There might have been both differential mortality and differential fertility between town and countryside. If so, it would also imply that all ancient historians who have employed varieties of the urban graveyard theory have been right (though not always on the correct grounds). This may not be an earth-shattering conclusion, but we should realise that it may form an important contribution to the theory. The finding would be remarkable, because the two models have not been combined simultaneously for the early modern world.

The important question remains to what extent the theory helps to chart migration. The implicit criticism of migration historians is that it only covers a part of immigration, and leaves emigration out altogether. Actual levels of migration could be several times that of the net migration postulated by urban graveyard theory.

With respect to emigration, the point is well-worth keeping in mind. Counter-streams (to stick to Ravenstein’s terminology) are likely to have been strong in the Roman world. Depending on the structure of the urban marriage market, there might have been much return migration. But there was also substantial emigration by others. The waves of colonisation (of a more or less forced character) at the beginning of the Principate are an obvious candidate. Furthermore, though most expulsions are likely to have only a temporary effect, some might have had led to a permanent removal of certain groups. But much emigration was not forced. In particular, one may think of the movement of Romans (traders et alii) to the East. Not all of
them came from the city of Rome, but many no doubt did, and many others originated from other urban environments.

But does the theory also cover immigration adequately? This brings us finally to what might be termed ‘the problem of need’: does the city need immigrants, and, if so, in what sense? For the early modern world, the streams of migrants are almost unproblematical: they came to the city in search for work. The fact that urban immigration was labour-induced has been so self-evident as not to warrant much discussion in application of the theory. In the case of Rome, the situation was different. If, as Holleran argues in her paper, the possibilities for free labour were low, especially for immigrants, than little pulls were exerted. The city did not need immigrants; it is rather the model that needs them. It remains something of a paradox that the postulate of high urban mortality is used to make the inference that migrants came to a city which turns out to have had no need for them. I will leave motives for migration and the functioning of the labour market for others to discuss, but for now, the corollary is important. If the room to accommodate migrants was relatively small, we rather do not postulate much more migration than postulated by the theory. The urban graveyard theory actually covers a relatively large amount of the immigration. The discrepancy between the net immigration postulated by the theory and the actual streams of migration that occurred in reality will not have been that large.

I would like to end this lecture with a paradox. In applying the urban graveyard theory, much weight is put on the Augustan population figure of 1,000,000. It is from this figure that we sketch both the Republican development of the population, and infer a stable (or perhaps slightly growing) population during the Principate. It is from this figure that we claim that Rome was unique in comparison to other cities of the Roman empire, and in comparison with most other cities of the early modern world. It is on this figure that we subsequently base the claim that the urban graveyard theory is applicable. And it is on this figure that a claim of differential density can be made that can be used as an indirect indicator of differential mortality. The enormous weight put on the figure gives reasons for worry. Nevertheless, despite these worries I would argue that the theory does apply. It applies both in the classic variety and in Sharlin’s variety. In addition to the streams of immigrants predicted by both theories, we should postulate a substantial counter-stream of emigrants. The resulting stream of migration to and from the city must have been large. The fact that labour opportunities were not abundant creates a serious problem of causation and motivation, but in one sense is good news: the room for any additional migration will have been small. Despite all the crudeness in the argumentation and the lack of any empirical evidence it seems that the theory covers migration much better than anywhere else. But ultimately the question remains: how do we use comparative evidence and models if our argument is that our case is unique?
Bibliography


