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5. Post Processual Economics: the role of African Red Slip Ware vessel volume in Mediterranean demography

by J. W. J. Hawthorne

The aim of this paper is to present a new approach to the study of Roman ceramics. Specifically, to address the way in which ceramics are used in demographic reconstruction, and to suggest that the current emphasis on formal economic explanations is leading to reconstructions of both the economy as a whole and individual settlement patterns which are erroneous. The fundamental premise of this paper is that economic and demographic analysis cannot go ahead without first coming to terms with the fact that ceramics were first and foremost containers from which to eat. To overlook this is not simply to miss trivial details, but may lead to a misinterpretation of changes in settlement patterns. These points are made through an analysis of a particular pattern which occurs on sites receiving African Red Slip Ware from the second to fourth centuries AD. It is argued that the apparent economic decline in the third century is actually the result of changes in the size of the vessels, such that the very substantial increase in size in the third century meant that fewer vessels were needed to consume the same amount of food as in the second century. It is further suggested that this change may be, at least partly, the result of the rise of early Christianity in Africa.

Mediterranean Demography and African Red Slip Ware

One of the most important ways of reconstructing the demography of the Mediterranean is field survey. Essentially, this involves the collection of artefacts and subsequent interpretation of spatial and temporal changes in the settlement patterns thus revealed. For the period of the Empire, African Red Slip ware (ARS) is particularly important as it is extremely common and can be reasonably well dated.

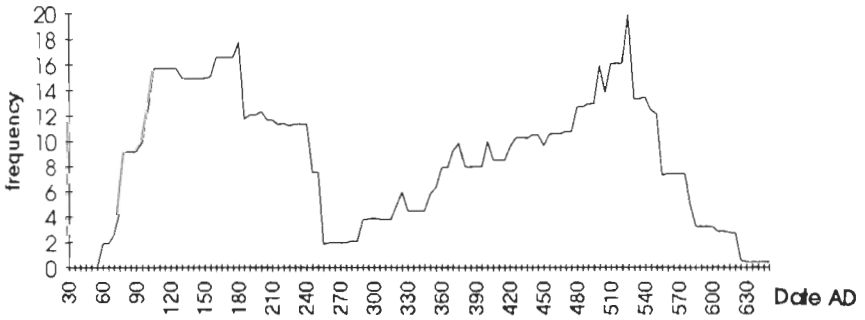

Figure 1. Total sherds per year as calculated from seven surveys

This graph uses summed absolute totals, but the same pattern is found if the average is calculated. The surveys are: Caesarea (Leveau 1984); Ager Tarraconensis (S. Keay pers. comm.); Monreale (P. Perkins pers. comm.); Mirabile (P. Perkins pers. comm.); South Etruria (P. Perkins pers. comm.); western Sardinia (P. Perkins pers comm.); Alicante (Reynolds 1993).

ARS is a fineware made in the area of modern Tunisia from the first to seventh centuries AD. The graphs presented here are calculated using the same methodology as Fentress & Perkins (1988): the amount of sherds of a particular form are divided by the number of years in its estimated date range, and this number allocated to each year covered. This is done for all forms and the totals summed to give total sherds per year for the duration of the forms recovered. The use of ARS in demography has tended to rest on the assumption that fluctuations in the quantity recovered across time reflects changes in settlement density, or settlement prosperity. In recent years, however, some doubt has been cast on the assumptions commonly used to explain changes in the frequency of ARS through time. In particular, Fentress & Perkins (1988), Cambi & Fentress (1989) and Millett (1991) have pointed out that some of the more commonly recurring patterns, such as the drop in ARS in the third century (figure 1), may not result from changes in settlement patterns, but rather from changes in supply. The implications of this are significant. If this is true then it means that the significant decline in the third century, which is observed on virtually all survey sites, is not the result of depopulation and settlement decline, but rather is the result of an economic crisis in Africa. The way is thus opened for a substantial revision of Mediterranean demography.

It is important to realise, however, that both of these points of view are part of a broader framework which sees changes in pot quantity as primarily an economic phenomenon. Either there is an economic crisis in the Empire as a whole with a population decline, or there is an economic decline in Africa. There are problems with both of these approaches. Firstly, it seems clear that the notion of an Empire-wide crisis affecting the availability of pots is not sustainable. The changes observed on surveyed sites from the first to fourth centuries are too similar to lend credence to such a view. It seems unlikely that rural sites in Africa such as around Cherchel (Iol Caesarea) (Leveau 1984) (figure. 2) should suffer exactly the same pattern of demographic decline as rural sites in Spain and Italy, such as those near Alicante (Reynolds 1993) (figure. 3) and at Sperlonga (Sagui 1980) (figure 4.). The widespread fluctuation in population (the ARS around Cherchel virtually disappears in the third century) is unlikely. What mechanism could account for this decline, and more tellingly, what mechanism could account for its rapid recovery in the fourth century? It is doubtful that there is any mechanism, short of the most virulent of plagues, which could wipe out so many people at the same time, and there is no mechanism which could so quickly restore population to equal and indeed often greater levels. The 'supply' hypothesis may, therefore, be of some use, in that the simultaneous changes could be explained by changing supply. However, the trough in ARS popularity in the third century corresponds exactly to the time that it was becoming popular in the eastern Mediterranean, as well as the west (Hayes 1972: Map 6). It is therefore difficult to see how the low frequency of ARS on western sites relates to an economic 'crisis', as there were clearly plenty of pots in circulation.

Given these problems, an alternative explanation is needed. It is argued here that a more convincing explanation of these changes can be found when the size of the vessels is considered.

ARS Vessel Volume: Spanning the Third Century

When a graph of sherd counts is compared to a graph of mean ARS vessel capacity, an interesting pattern emerges. The drop in sherds is almost exactly paralleled by an increase in mean vessel volume (Compare figure 1 with figure 5). The volume was calculated using the AutoCAD Advanced Modelling Extension and the profiles in Hayes' (1972) *Late Roman Pottery* (Hawthorne forthcom-

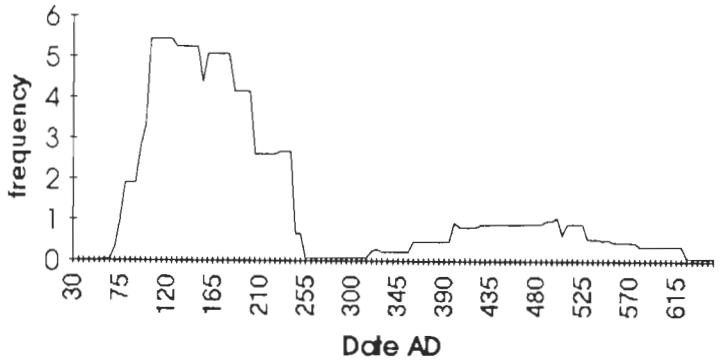

Figure 2. Sherds per year for Cherchel (Iol Caesarea), calculated from Leveau (1986).

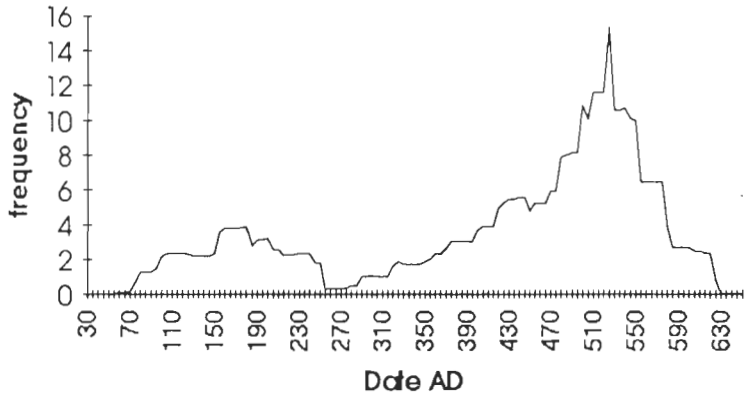

Figure 3. Sherds per year for Alicante, calculated from Reynolds (1993).

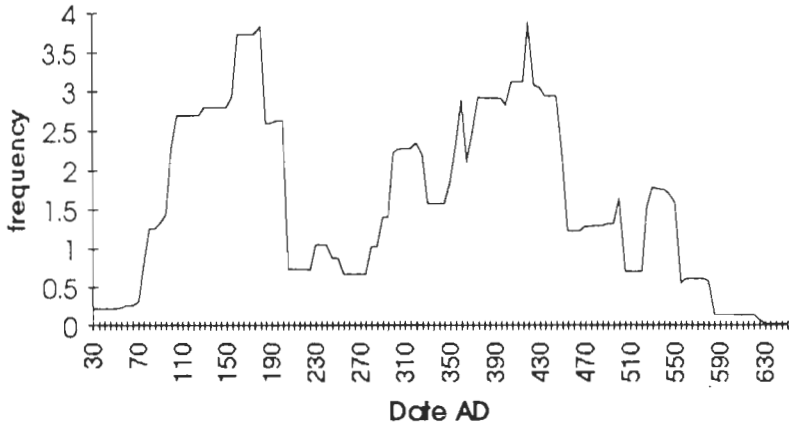

Figure 4. Sherds per year for Sperlonga, calculated from Sagui (1980).

ing). The reason for this change can plainly be seen when the dominant vessel types are examined. In the second century, the dominant forms are small bowls, but in the third century the dominant forms are large open dishes. From the fourth century onwards there is a mix between small bowls, large dishes and large plates. Given the apparent correlation between the drop in sherds and the rise of the vessel volume, we might suggest that the two are causally linked, that is to say, that the reason for the drop in sherds in the third century is that fewer vessels were required to contain the same amount of food as in the second century.

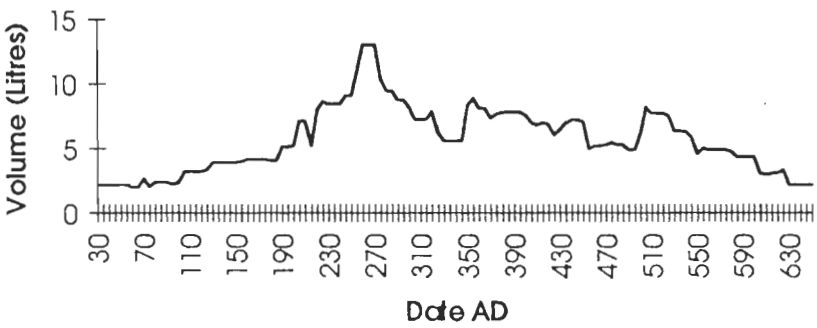

Figure 5. Mean vessel volume.

This argument is supported by the results of an additional calculation. If the number of sherds per form is multiplied by its volume and then calibrated by its average breakage rate (calculated from a study of over 500 sherds from Carthage and Lepcis Magna), the pattern shown in figure 6 emerges. Although the graph is spiky (we would expect this given the nature of the calculation), it clearly shows that the 'total vessel volume' does not drop in the third century, in comparison to the sherd count. Thus a strong case can be made that the drop of ARS in the third century is the result of neither depopulation nor an African economic crisis, but rather the product of a change in the average size of the vessels.

Explaining Change in the ARS Vessel Repertoire

It remains to consider what this change in the ARS vessel range represents. It is argued here that, firstly, the change reflects a change in eating habits, and that, secondly, one of the most important factors may have been the spread of Christianity in Africa.

It has been suggested by others that the change to larger pots in the third century may represent a move to communal eating (Carandini 1981:15; Fevrier 1988). This seems to be reasonable, as the dominant vessel forms are indeed extremely large. Some of the examples of Hayes Form 50 listed in *Late Roman Pottery* (1972) are over half a metre in diameter. These large vessels cannot represent anything but communal dishes, that is to say, dishes from which several people would eat

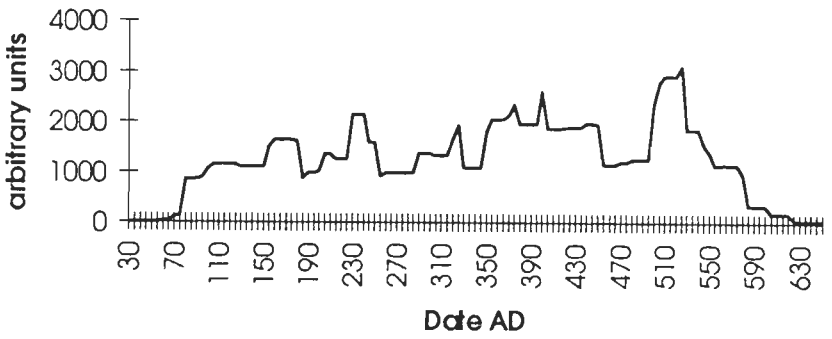

Figure 6. Sherds volume, calibrated by the average breakage rate for each form.

(cf. Bats 1988:23). These dishes are in contrast to the bowls of the first and second centuries which were small, and more likely to be used as individual place settings. It is pertinent to consider whether the changes in vessel forms might have been brought about by the adoption of particular types of food, as opposed to particular methods of serving. However, inferring such a particularistic function from form is notoriously difficult (Henrickson & McDonald 1983; Streeten 1985:23; Moorhouse 1978), and given that at any point in time there is *always* at least one form which could hold anything from a slab of meat to soup, it would not necessarily be particularly fruitful to try to link the changes in form to changes in food *per se*, assuming that such a fine chronological resolution on the history of food in antiquity could be obtained. Rather, it is of more use to consider the manner of eating and serving.

This still does not answer the question of why the change should occur. It is well known that a culture's cuisine tends to be extremely resistant to change (Farb & Armelagos 1980:3–14; Bats 1988:27). We would therefore expect a change of this nature, from individual to communal dining on a virtually Empire-wide basis, to have had a fairly powerful initial stimulus. I suggest that an important causal factor may have been the rise of Christianity in Africa, although the adoption of communal eating may simply have been the result of people emulating their neighbours, rather than necessarily seeing anything particularly Christian in the practice.

Christianity as a Factor in ARS Change

Christianity became one of the official religions of the Empire in AD 313, but before this it had a history of steady growth. Africa was particularly prominent in fostering early Christianity (Raven 1969:118; Birley 1992). From the second century onwards, Christianity had grown to the point where Rome was forced to take it seriously, as a threat not only to Roman religion (Christianity eschewed emperor worship), but to public life in general (Raven 1969:117). Hence there were persecutions of Christians which intensified throughout the second century and reached a peak with the so-called Great Persecutions in the later third century (Raven 1969:126; Birley 1992; Addis 1893:63). It is against this background that the Christianisation of cuisine must be seen.

The change to communal eating in the third century appears to be, at least partly, related to the rise of Christianity in Africa. The early Christians were very clear on the subject of eating – it was to be communal and simple, with the minimum of material trappings. Commensalism as an ideology is well documented. Plutarch, writing in the second century tells of a banquet to which the guests had brought their own meals and were eating individually: "Where each guest has his own private portion, fellowship perishes" (Plutarch, Table Talk, 644C). Also in the second century, Clement of Alexandria urges James to the Christian ideal of commensalism: "But I know you will do this if you fix love in your mind; and for its entrance there is one sufficient occasion, the common partaking of food" (quoted in Latham 1982:60). In a similar missionary vein Paul berated the Corinthians for individual dining: "when you meet together it is not the Lord's supper that you eat. For in eating, each one goes ahead with his own meal" (I Corinthians II: 17–34). Here the Lord's supper refers to a communal meal. This communal Lord's supper is mentioned in many texts and is commonly known as an *agapé* or love feast, and may stem from a recreation of Jesus eating with his disciples (Latham 1982:56).

There seems to be a clear case for the rise of the common meal representing the adoption of Christian values, at least initially. In addition to being communal, Christian meals were also supposed to be simple. Clement of Alexandria in the second and third centuries wrote several pieces on Christian daily life. He urged simplicity in the food eaten, encouraging food that promoted strength and health, especially honeycomb and fish as recommended in the Gospels (Pedagogue ii2; 13; 14). He also encouraged the drinking of water rather than wine and good table manners – gulping, hiccuping, slurping or slobbering were to be avoided (Glover 1909:264). More importantly though, Clement of Alexandria urged the use of simple vessels of clay rather than gold or silver, and the eschewing of luxuries in general (Glover 1909: 264). He states: "In general, as to the food, dress, furniture and all that pertains to the house, I say at once, it should all be according to the institutions of the Christian man, fitting appropriately person, age, pursuits and time" (Pedagogue ii B8 1–3). This may explain the stark simplicity of the large dishes of the later third century, such as H50, and the lack of variation between forms, as well as the lack of decoration. This asceticism is also seen in the famous quote accredited to Jesus: "It is easier to put a camel through the eye of a needle than for a rich man to enter the kingdom of God" and also in the fact that Christians refused to decorate their houses in the ostentatious Roman manner (Birley 1992:41).

In this context it is instructive to consider the evidence for Christianity in terms of the decoration on the pots in the third century. Basically, such evidence is very slim, as we might perhaps expect. Within Africa it is not unusual to find pieces of closed El Aouja ware with Christian decoration, but this was almost never exported in any quantity (Carandini 1981:147). A few pieces have been found in Spain, however, with scenes such as Daniel in the lions den and Jonah and the whale. On the whole, however, ARS did not travel as an overtly Christian item – certainly not the open wares which were not decorated with possible Christian symbols (palm branches) until the mid-fourth century, and definite Christian symbols (crosses) until the early fifth century (Hayes 1972:220–2), at which time we may speak of the '*grand plats chrétiens*' (Baradez 1967). This conservatism is what we would expect given the illegality of Christianity until AD 313. The 'Christianness' of the pots lies not in the decoration *per se* – rather it lies in the manner of eating and the *lack* of decoration. The complete lack of decoration on the most popular third century forms may thus be seen as reflecting some form of Christian asceticism.

The changes in the archaeological record find a good parallel and explanation in the Christian

ideals of the time. However, it remains to consider why this happened – why the modes of eating should have changed so rapidly and so radically, given that cuisine is normally a conservative institution. The reasons for the changes appear to lie in a) the importance attached to observing the meal customs by the early Christians and b) the reinforcement of Christian identity which resulted from the persecutions in the third century.

The importance of observing the meal customs for early Christians was considerable. Peter explained to Mattidia, mother of Clement of Alexandria:

> We do not partake of food from the table of gentiles, nor indeed are we able to share their hospitality, because they live uncleanly. But when we persuade them to mind the truth and do it, and have baptised them with the thrice-blessed invocation, then we have table fellowship with them. Otherwise, even if it be father or mother or wife or child, or brother, or any other who by nature has our affection, we cannot dare to eat with him. For by our religion we make this distinction. So do not take it as an insult that your son does not eat with you until you adopt his belief and practice. (quoted in Latham 1982:58).

To the Christians, meals were not casual fashion. They were a means of asserting identity, intricately bound up in the ideology of the early church. Unlike earlier communal dining (cf. Bats 1988) and indeed later communal dining, the Christian communal meal of the second and third centuries was a very definite statement of identity and ideology, setting the participants apart from non-Christians. Thus, the rise of the common meal went hand-in-hand with the rise of Christianity; the meal was, therefore, a badge of Christianity, and Christian identity was reinforced in the face of opposition from Rome (and other religions such as Judaism). This opposition increased in the third century in the form of brutal persecutions, and it is conceivable that the adoption of communal meals and the adoption of plain and simple pottery is a response to these persecutions.

At this juncture we might consider whether there is any other evidence which could support this view of the rise of Christianity as a decisive factor in Roman Africa. Such evidence may perhaps be found in the inscriptions from grave markers and buildings. Meyer (1990:figure 1) has calculated that in Roman Africa the number of funerary inscriptions peaks in the later second century and declines to almost nothing in the third century – this parallels the fluctuations identified in the ARS sherd counts. Further, Fentress & Perkins (1988: figure 4) have shown how the number of inscriptions on buildings follows the same pattern as the ARS sherd counts. This led Fentress & Perkins to suggest that "both are some form of index of economic well-being." (1988:211). However, Meyer has suggested that the drop in funerary inscriptions in the third century may represent a change from a period in which it was desirable to emphasise individual status and prestige (the second century) to one in which such public display was not encouraged (1990:82). Meyer did not identify a specific explanation for the change, but given the above discussion on Christianity and its ideals of asceticism, it is perhaps apposite to consider whether or not the patterns in the inscriptions also represent the spread of Christianity in Africa. Christianity certainly seems to have had an affect on funerary inscriptions at least; this is the explanation commonly invoked for the general absence of funerary inscriptions in late antiquity (Saller & Shaw 1984). However, given that dedications on buildings are also a means of expressing prestige, their decline may also be related to changing attitudes to public display.

Finally, the diffusion of these pots must be considered. There seems to be little difficulty in explaining the spread of the A wares (the pots of the first to early third centuries, made in northern

Tunisia), for they continued a pattern of eating that was already extant in the Empire. However, if the C wares (the larger pots of the third to fifth centuries, made in central Tunisia) had the Christian symbolism as has been argued here, then their adoption should surely have been more patchy, as the uptake of Christianity around the west Mediterranean was far from even in the third century. Yet the C wares are the very pots which expand the distribution of ARS to the east Mediterranean for the first time, and generally have a wide distribution. If Christianity is not universally accepted, and moreover, if Christianity may only be an urban religion in the provinces at this time, why does this phenomena occur? A possible answer lies in the mutability of the meanings of material culture and its context. For example, in contemporary Eastern Europe, *Coca Cola* has a potent symbolism as a material representative of western culture, especially in the changed political climate of the last few years. But a can of 'Coke' in a British or American newsagents does not have this symbolism. Certainly, if pressed most people in the street could identify 'Coke' as a symbol of western popular culture, but in practice there is no conscious symbolism in the act of drinking 'Coke' in Britain or America. In the same way, the C wares have a very particular symbolic message within Africa, but this message need not have been understood or accepted in other parts of the Empire. However, even if it was only understood in urban contexts, the nature of the diffusion of style is such that the pots will also be used in rural areas, although the people there will only see themselves as adopting the practices of the local elites in the city, not necessarily Christian practices. People in pagan rural areas may be aware that the pots have had something to do with Christianity at some point, but for them it may be more important to copy the local elites, Christian or not, than to worry about what to them may be a particularly weak symbolism.

Conclusion

This paper has attempted to address several issues. Perhaps foremost is the need to look at pots not simply as economic indicators, but to integrate economic studies with the notion that, at the end of the day, pots are containers. The example of ARS used here shows quite clearly the advantages of such an approach. This paper aligns itself with those works which are sceptical of the third century 'crisis', in that the apparent economic crises are here argued to represent more of a change in eating habits than any actual economic upset. Finally, this paper has attempted to explain the observed changes using Christianity as the initial motor of change. In this way a phenomenon which was originally seen as an economic crisis can perhaps be explained as the result of a change in ideology.

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