Roman pottery: models, proxies and economic interpretation

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A long-running debate about the relative primitiveness or modernity of the economy of the Greek and Roman world was re-invigorated between the 1960s and 1980s. M. I. Finley remained sceptical about archaeological evidence, but K. Hopkins (1980) saw its potential for testing his model of the Roman economy. Since then, archaeological fieldwork has generated growing quantities of potential economic evidence, especially from the Mediterranean core of the Roman empire, and the scope for its interpretation has been increased by books with much wider perspectives. Economic aspects of the empire were included in the new edition of *CAH* XI, and a volume of the *Cambridge Ancient Economic History* covering this period is in preparation. Such publications demonstrate the need for a critical understanding of material evidence that goes well beyond my book *The archaeology of the Roman economy* (1986). This paper will include a consideration of the first theoretically-reflexive Roman archaeologist, R. G. Collingwood, before examining the diverse themes which pottery has been expected to illuminate over the last two centuries. I will then examine methods used in extracting economic interpretations from raw archaeological data, and look closely at model-building and the concept of ‘proxy evidence’. Examples of the use of ceramic data for economic interpretation in recent volumes of *Britannia*, *JRA* and the specialist ceramic periodical *Acta Rei Cretariae Romanae Fautorum* (*ActaRCRF*) will be examined before I suggest possible ways forward.

G. Storey has recently (2004, 106-9) reminded us that the debate between ‘primitive’ and ‘modern’ interpretations of the economy of the Roman empire cannot be wished away, since it encapsulates fundamental differences in outlook. It has become conventional to represent Finley and M. Rostovtzeff as opposite poles, and to compare them with their substantivist/formalist equivalents in economic anthropology, but this conceals intriguing differences in their concepts of social evolution. Hopkins appeared to solve the primitive/modern problem by substituting model-building for polemics, and his sociological background gave his taxes-and-trade model (1980) a cachet of scientific respectability. Many writers position themselves on the theoretical map by expressing their proximity to Finley, Hopkins, or others.

The rôle of material evidence in archaeology and anthropology was enhanced by the model-building and hypothesis-testing approaches of ‘processual’ or ‘New’ archaeologists such as L. Binford (1964) or D. Clarke (1972). Hopkins offered the same optimism, and gave archaeological evidence a clear rôle in refining his model. Post-processual archaeology undermined...
this optimism by attacking the positivist aspects of processualism, and moved the focus of interest away from economics towards individual agency, identity and gender. However, the importance of ethnoarchaeology in shaping new interpretations allowed material culture to retain its enhanced rôle. Cultural studies of literature, sociology and art history reinforced the focus upon individuals and their experience of the world, and encouraged interest in historiography. Meanwhile, territorial differences between archaeologists and ancient historians have diminished through recognition of the complementary nature of their approaches.

‘New Archaeology’ left a legacy of methodological rigour that has improved the recording and reporting of field-survey projects, while the questions raised by post-processual archaeology demand thoughtful excavation strategies and minutely accurate observation of material evidence. Thus, one of the most significant categories of material evidence recovered from Roman excavations — ceramics — has been recorded and studied in more detail than ever before; whatever the theoretical outlook of an excavator or researcher, pottery invites questions which have unavoidable economic overtones. Given the observable but varying distribution patterns of amphorae, mortaria, fine wares and kitchen wares, it should be possible to say a lot about production, distribution, consumption and disposal. This brings me to the question that lies behind this paper: what might readers who do not study specialist monographs or excavation reports learn about the economic interpretation of Roman pottery from articles and reviews in recent volumes of JRA or Britannia? Before answering this question, it is necessary to examine some fundamental aspects of explanation in archaeology.

R. G. Collingwood and the nature of the past

Archaeologists aware only of Collingwood’s Romano-British archaeology will have gained few clues to his philosophy from the data-collection and recording carried out for The Roman inscriptions of Britain (id. and Wright 1965) or the empirical classification of Romano-British pottery, fibulae, villa-plans, etc., in The archaeology of Roman Britain (1930). Collingwood made a conscious choice to select Roman Britain as a suitable subject for the application of his ideas, but did not ‘show his working’; furthermore, his major statement about historical interpretation (The idea of history) was published posthumously (1946). His archaeological methods and interpretations were easily criticised by contemporaries, who then felt themselves absolved from exploring his philosophy. R. G. Collingwood’s father William was an artist, antiquarian and historical novelist who became John Ruskin’s secretary. He educated Robin at home until his early teens (at a short distance from Ruskin’s house overlooking Lake Coniston in Cumbria). Artistic, political and philosophical influences derived from Ruskin and W. G. Collingwood set R. G. on a path to Oxford University, where he was taught by F. Haverfield, now remembered chiefly for popularising the term ‘Romanization’ (1906).

9 Hodder 1979.
10 The title of Mattingly’s paper “Being Roman” in JRA 17 (2004) evokes Heidegger’s Dasein, which has attracted considerable interest amongst archaeologists.
11 Trigger 1989. It is now impossible to imagine an approach to “Romanization” that did not contextualise Haverfield and review post-colonial attitudes to empires.
12 Laurence 2004, 104.
15 JRS includes very few papers about ceramics (e.g., Fülle 1997).
16 For some appreciative remarks about his work on pottery, see Tyers 1996, 15-16.
17 “The field had, accordingly, to be a small one, and ripe for intensive cultivation” (1939, 120).
18 “The two books [Roman Britain and The idea of history] ... might have been written by two different people”: Evans 1997, 11.
19 Hodder 1995; samples of recent work on Collingwood’s philosophy can be found in Boucher, Connelly and Modood 1995.
Collingwood remains important because he played an early rôle in a debate about the study of history that continues today. He believed that history, like philosophy, was a phenomenon of the present, and could only be understood in terms of its own history (1926, 364):

The present alone is actual: the past and the future are ideal and nothing but ideal. It is necessary to insist upon this because our habit of ‘spatializing’ time, or figuring it to ourselves in terms of space, leads us to imagine that the past and future exist ... This is simply an illusion, though a tenacious one; and it is necessary to eradicate it with great care before one begins to realize the true problem of history. For we commonly suppose, in our more illogical and slipshod moments, that the past still exists and lies somewhere concealed behind us, and that by using appropriate instruments and methods we can discover it and investigate its nature...

Most historians had been (and many remain) dedicated to the reconstruction of an objective account of the past, and believed that the purpose of research was to recover and evaluate more information in order to eliminate bias. Archaeologists had a limited brief: discover data that will tell us something about ‘prehistoric’ periods before documents, or fill in gaps left by written evidence in historical periods. Thus, the much-repeated metaphor of archaeology as the ‘handmaiden of history’ is highly appropriate if history is practised without reflection about its nature and purpose. The survival of this attitude amongst practising historians is easily underestimated by archaeologists and classicists accustomed to more than 20 years of anthropological or post-processual approaches to the past.

Because of Collingwood’s underlying idealism, and his insistence upon historiographical awareness, archaeologists since the 1980s have found him a useful ‘ancestor’ when reacting against the behaviourist and determinist tendencies of New Archaeology. Like other fields of cultural study, post-processual archaeology draws upon a pantheon of post-modern thinkers (Foucault, Derrida) who have focused upon discourse and language. Since Collingwood was an active participant in archaeology, employing a wide range of skills (from drawing and classifying artefacts to excavation and historical interpretation), our discipline can claim its own ‘philosopher-archaeologist-historian’ who contributed to the “post-empiricist challenge ... questioning the intellectual assumption of referentiality and representationalism”.

I share Collingwood’s view of the past, and also believe that narrative accounts result from preconceptions and/or hindsight rather than from logical deductions from objective data. A range of plots and metaphors is drawn upon to provide the basic shapes of explanations through ‘emplotment’. For this reason, my study of ceramics and the Roman economy will consist almost entirely of an exploration of what other writers have said: most will be quoted in their own words, rather than being paraphrased by me. I will first trace the origins of an expectation that pottery should illuminate the ancient economy.

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22 The post-modern view is summarised by Munslow 2003, 23: “In addressing the empirical, analytical and linguistic nature of history we become much more aware of our epistemological choices, the nature and role of referentiality, the use of theory and concept, and how our narrative-making produces the meanings we ascribe to the past”. Sceptics may be consoled by Evans’ judgement (1997, 190): “Postmodernist history’s return to the individual, to the human element in history at every level, redresses the balance and is a major gain in this respect”. E.g., “One has only to read an account of a society for which virtually no written records exist — for example Iron Age Britain or medieval Zimbabwe — to see how lacking in human vitality history can be when denied its principal source material” (Tosh 2002, 55-56).
23 Hodder 1995.
26 White proposed prefigured narrative forms in a series of detailed studies (e.g., 1987) whose implications for ancient history are examined in Morley 1999.
27 “We commonly do not remember that it is, after all, always the first person that is speaking”: Thoreau, Walden (1854) 1.
28 A more detailed history of archaeological approaches to Roman pottery in Britain can be found in Tyers 1996, 1-47.
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From art to economics: themes in the study of pottery

It is generally admitted that there is no art which so expressively illustrates a nation’s taste and progress as the ceramic art. It does more — it proclaims the character and peculiarities of the people (Binns 1865, xvii).

The artistic qualities of Greek vases were appreciated long before pottery became part of a wider interest in artefacts that matured into culture-historical archaeology with the help of typologists such as Montelius in the 19th c.29 While anthropology was very influential upon prehistorians, Fine Art connoisseurship had more impact on archaeologists studying Roman artefacts, since they were likely to have had a classical, historical or artistic education. Art-historical methodology contributed to typology and classification, but Arts and Crafts ideas promoted wider thinking about the social context of production and economic morality.

Deeper insight into 19th-c. perceptions of what could be learned from pottery can be gleaned from a number of archaeological and non-archaeological sources. H. B. Walters’ History of ancient pottery (1905) was an expanded version of a work published by Samuel Birch in 1858. Between them, these books used the collections of the British Museum to provide an explicit statement of the status of pottery as evidence for the past, and what could be learned from its study. According to Birch (1858, vol. 2, 395-96):

It may be compared with those fossil remains by which man attempts to measure the chronology of the earth, for the pottery of each race bears with it internal evidence of the stratum of human existence to which it belongs. Its use is anterior to that of metals; it is as enduring as brass .... in every quarter of the world fictile fragments of the earliest efforts lie beneath the soil, fragile but enduring remains of the time when the world was in its youth.

Since Birch was writing before the publication of Darwin’s Origin of species (1859) and Lyell’s The geological evidences of the antiquity of man (1863), his analogy between pottery and fossils is interesting. References to progress come from an earlier Enlightenment tradition of social evolution and are not yet tinged by the biological paradigm of a competitive struggle for existence. Furthermore, a lack of appreciation of the depth of prehistoric time probably made the ‘youth’ of the world appear to be a short prelude to the emergence of civilisation.30 Walters’ expanded revision of Birch’s work expressed a judgemental view of the decay of Greek artistic taste in Roman times, but also extended Birch’s description of the purpose and potential of ceramic studies (1905, vol. 1, 10):

Sculpture, painting, architecture, and other arts have a more limited range, and tell us nothing of domestic life or social progress; but the common utensils of daily life, like flint implements or bronze weapons, are of incalculable value for the light that they throw on the subject, and the evidence which, in the absence of historical data, they afford. We have also called attention to the prevalence of universal laws acting on the development of the early art of all nations.

Despite these bold claims for the study of social progress and an appeal to universal laws (reminiscent of evolutionary and processual archaeology in the 1950s and 1960s), Walters’ concluding statement restates his condemnation of Roman art, barely touching upon other purposes of studying pottery (1905, vol. 2, 554-55):

We have traced the development of painted decoration from monochrome to polychrome, from simple patterns to elaborate pictorial compositions, and so to its gradual decay and disappearance under the luxurious and artificial tendencies of the Hellenistic Age, when men were ever seeking for new artistic departures, and a new system of technique arose which finally substituted various forms of decoration in relief for painting. And lastly, we have seen how this new system established itself firmly in the domain of Roman art, until with the gradual decay of artistic taste and under the encroachments of barbarism, it sank into neglect and oblivion.

This is a striking example of the circularity that bedevils archaeology in historical periods. It

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is frequently claimed that broader cultural or historical trends are ‘mirrored’ by artefacts, but artefacts are simultaneously adduced as evidence for the existence of those trends. Ideas about the interaction between material culture and social evolution would be familiar to anyone who had read 19th-c. anthropological works such as Morgan’s *Ancient society* (1877), but Walters did not contextualise ceramics in the broader cultural and economic setting of the classical civilisations. He did however reveal Arts and Crafts thinking (1905, vol. 2, 430, 433-34):

Roman vases, in a word, require only the skill of the potter for their completion, and the processes employed are largely mechanical, whereas Greek vases called in the aid of a higher branch of industry, and one which gave scope for great artistic achievements — namely, that of painting. ... The Romans ... did not hold the art of pottery in very high estimation, and their vases, like their tiles and lamps, were produced by slaves and freedmen, whereas at Athens the potter usually held at least the position of a resident alien. These were content to produce useful, but not as a rule fine or beautiful, vases, for the most part only adapted to the necessities of life.31

This diagnosis contains a clear concept of the rôle of freedom (or the lack of it) in shaping artistic merit. This idea was shared by Ruskin and the Arts and Crafts Movement, and contributed to Marx’s analysis of how society was structured by forms of production. Even wider currency is demonstrated in less obvious contexts, such as a history of pottery-making in Worcestershire published in 1877 by R. Binns, whose final sentence adds utility to the list of reasons for studying pottery (1877, xxvii):

The progress of science and chemical knowledge in the middle ages has given us the decorated Fayence of Italy, and, advancing still, the fine porcelains of Germany, France, and England, combining the talents of the sculptor, the painter, and the goldsmith in their adornment, and producing works which have no rivals at the present time. These productions were the result of a peculiar condition of society. To the feudal system, which knew no law but the will of the patron, we owe these wonderful creations, enabling us to store our museums with artistic treasures, exhibiting models for instruction, and at the same time warning both artists and artisans to beware of overweening self confidence.

*The utility of knowledge*

Walters, and other writers who were not specialists in the pottery of antiquity, drew functional analogies between modern tablewares and those of the ancient world.32 One interesting publication is a catalogue of ceramic products “illustrative of the mineral wealth of the country, and of the application of its various mineral substances to the useful purposes of life” assembled from 1835 (Reeks and Rudler 1876, preface):

As the progress of the Geological Survey continued, various other British mineral substances, which either had been in former times or were now employed for ceramic purposes, became known; and it was considered desirable to form a collection which should illustrate the composition and manufacture of British pottery and porcelain, from the occupation of Britain by the Romans to the present time.

The Victoria and Albert Museum was established in London in 1857 with similar regard to the provision of models for emulation in architecture or industrial design.33 However, the museum’s artefacts and works of art also drew attention to the pre-industrial craft skills appreciated by the Pre-Raphaelite Brothers and the Arts and Crafts movement. Heywood Sumner (1853-1940), an organiser of the first Arts and Crafts exhibition in 1888, excavated Roman pottery kilns in the New Forest and published reports including beautiful illustrations not only of pottery and kilns but people working in idyllic woodland settings (1927, 44). The same thinking lies behind R. G. Collingwood’s perception of Late Roman pottery production in the New Forest, which combined Ruskinian sentiments about industrialisation and ‘taste’ with Arts and Crafts aspirations about traditional crafts (1937, 88-89, 91):

31 This concept is important in judging the status of Greek painted vases and metalwork: Vickers and Gill 1994.
32 Walters 1905, vol. 2, 434; Reeks and Rudler 1876, 61-62.
33 Chivers 2004, 736.
The effect of uniform government and improved communications was a tendency to concentrate industry at centres where... opportunity existed for increase and improvement of output. Mass-production thus developed, with its inevitable consequences of cheap and efficient articles and decline in taste. The spirit of the age in industry was one of dull and ugly efficiency. Sumner has shown (New Forest Pottery Sites) that the New Forest potters lived in temporary huts of slight construction. One might hazard the conjecture that these nomadic industrialists were not slaves but free men, peddling the produce of their labour; a wandering woodland life does not permit the supervision that slaves demand.34

It is not difficult to identify concepts of this kind in older archaeological publications, but the language of economic rationalism that pervades current political and academic culture may not be so obvious in archaeological writing. M. Fulford’s recent survey of the economy of Roman Britain considered the supply of olive oil from Spain “economically irrational” (2004, 323) because it did not fit a paradigm of equilibrium economics, with Britain considered as an economic unit.35 The contrast between Collingwood and Fulford’s representations of the same Roman province illustrates the importance of explaining both the grounds for a perception of the Roman economy and the theoretical basis upon which material evidence is interpreted in economic terms.

Economic interpretation of ceramics demands a sound knowledge of forms, fabrics, distributions and chronology.36 From the 19th to the 20th c., classifications and typological schemes brought order and dates to many classes of pottery. Catalogues of find-spots of pottery types or name-stamps invited spatial representation on maps, while increasingly thorough excavation reports allowed specialists both to look at broad distribution patterns and to scrutinise the contexts of individual finds. When visual identification was reinforced by scientific description of clay fabrics and characterisation of their mineral constituents, real progress could be made towards economic interpretation. Synchronic studies of specific vessel forms and fabrics became abundant, while quantification of excavated material allowed diachronic studies to be conducted.37 The encouraging results of general and site-based ceramic studies encouraged the idea that this almost indestructible form of evidence could make up for the loss of perishable traded goods from the archaeological record. The next section examines the theoretical basis of the way that pottery came to be incorporated into the study of economic history, frequently in the context of models of production and distribution.

Models, modes and proxies

Models and modes achieved considerable prominence in the early 1980s because of two publications. Hopkins’ paper on taxes and trade in JRS 1980 set out a model for the circulation of money and goods in the Roman Empire. D. P. S. Peacock’s Pottery in the Roman world (1982) proposed a series of modes of production, and assessed their correspondence to Roman pottery industries. Hopkins restated his model (in the light of comment and criticism) in 1995-96, and it was reprinted in 2002 as “the only comprehensive attempt to explain the dynamics of the Roman imperial economy currently available” and “the starting point for further research for the foreseeable future”.38 Hopkins’ flow of goods and money between central and peripheral provinces of the empire resembles the systems diagrams adopted by American processual archaeologists in the 1960s and 1970s.39 The use of such models will have been familiar to Hopkins as professor of sociology at Brunel University, but specific inspiration is more likely to have come from the world-systems and core-periphery models that have enjoyed enduring popu-

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34 The explicit reference to Sumner includes a rejection of slavery reminiscent of 'Noble Savage' thinking and 19th-c. social evolutionism.
35 Collingwood (1925, 35-36) argued against treating Britain as an independent unit.
36 Tyers’s concise history of Roman pottery studies (1996, 1-23) ranges well beyond Britain.
37 E.g., Tomber 1993.
38 Scheidel and von Reden 2002, 190-91.
39 E.g., Redman 1978, 332-34 and fig. 14.2, with comments in Greene 2002a, 245.
larity in economic history and archaeology.  

Hopkins was careful to define his terms (1995-96, 191-92):

First, models allow us to perceive the structures or repeated patterns which lie behind the superficial flow of individual actors and events, which fill the pages of traditional Roman narrative histories. Secondly, models allow us to construct whole pictures, into which the surviving fragments of ancient source material can be plausibly fitted. The model is a sort of master picture, as on the front of a jigsaw puzzle box; the fragments of surviving ancient sources provide only a few of the jigsaw pieces.

The rather Braudelian first sentence implies that there are indeed recognisable structures and patterns in history, a suggestion confirmed by the metaphor of a “whole picture” and “master picture”. Hopkins cited Collingwood in support of his view that a model is a form of answer, not a question, and not the same thing as a hypothesis (1995-96, 196): “it is our critical intelligence which is prior to the sources ... it is not the evidence, referred to in hushed tones, which dictates our conclusions, but our selection and interpretation of the evidence”. Nevertheless, he leaves the reader in little doubt that there is a “picture” to be recovered, and that it will have a discernible structure. Unlike Collingwood, Hopkins stopped short of “the idea that history is a discourse about, but categorically different from, the past”. He did not pose the deeper question about how the ‘critical intelligence’ that guides the selection and interpretation of evidence is formed in the first place.

Like Hopkins, Peacock moved between two disciplines (from geology to archaeology) but, unlike Hopkins, he joined a Department of Archaeology. During Peacock’s early years at Southampton University a succession of Professors of Archaeology promoted distinctive approaches to the past. B. Cunliffe was a prominent excavator of Iron Age and Roman sites, with a keen interest in ceramics; he saw the potential of establishing a scientific laboratory where ceramic petrology could be carried out under Peacock’s direction. When Cunliffe left for Oxford in 1972, he was replaced by C. Renfrew, a British advocate for New Archaeology whose interest in early societies included economic aspects that could be investigated with the help of laboratory science. Renfrew also made extensive use of anthropological analogies, and when he departed for Cambridge in 1981 this specialism was enhanced at Southampton by the appointment of P. Ucko to the chair. Throughout this period, Peacock will have been conversant with the N American tradition of combining ceramic studies with economic anthropology.

In 1977 Peacock edited an influential book about pottery and economics, which opened with an essay by Renfrew (1977, 1-2):

Archaeology has become more ambitious in its approach to the social and economic structure of early empires and states, and of less highly organized societies, while anthropology has increasingly concerned itself with material aspects for which archaeology has a relevance. The work of Karl Polanyi provides a great stimulus to the revival of exchange studies in archaeology, and the stimulus is today being renewed from a different direction in the work of the neo-Marxist school, although their emphasis is upon production as the central concept and its modes rather than on exchange.

This sounds like an advertisement for Peacock’s 1982 book Pottery in the Roman world, whose subtitle (an ethnoarchaeological approach) reflected Renfrew’s interest in economic anthropology. Peacock’s models (which he called “modes of production” when describing them in detail) were constructed from anthropological studies of ceramics published since the 1950s (1982, 2), and bolstered by the hypothesis-building approach of New Archaeology. In addition, Peacock

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40 E.g., Rowlands 1987; Woolf 1990; see comments by Storey 2004, 128.
41 Jenkins 2003, 7.
43 Cann, Dixon and Renfrew 1969.
44 Peacock was promoted to a personal chair in 1990, and was appointed to the established Chair of Archaeology in 1996 following Ucko’s move to University College, London.
45 Awareness was reinforced by the presence of Dean Arnold and Charles Redman at a conference held in Southampton in 1980: Howard and Morris 1981.
had experienced a 'road-to-Damascus' moment (1982, xii):

... The idea of using ethnographical evidence as a means of understanding classical ceramics arose while processing many tons of pottery from the recent British excavations at Carthage. A visit to the local pottery souk at El Kram was a stimulating experience, for it seemed that if the material on sale was to be broken up and placed in boxes, it would differ little from the boxes of material we were studying. ... my objective is ... to understand the processes operating in the Roman ceramic industry. ... the principles, lessons and discussions should have wide relevance in the study of ceramic production in early complex societies.

This statement illustrates the central problem involved in designing models: only someone already well acquainted with Roman ceramics from Carthage, and aware of ethnoarchaeology/economic anthropology, would have been able to make the link between the modern pottery of Tunisia and its Roman counterpart. While this knowledge provided optimism that studying the production of the former would contribute to understanding the latter, there is a risk of circularity in using the same information both in the construction and application of a model.

The hope that the identification of processes would unlock generally applicable understandings was of course a central aspiration of New Archaeology; Peacock's book was completed just before the appearance of ethnoarchaeological publications from I. Hodder (1982) which contributed to a turn towards detailed contextual studies. Alongside the processualism, the pottery of pre-industrial Europe evokes the spirit of Ruskin and the Arts and Crafts Movement. Peacock's perception of the importance of recording a dying tradition coincided with a shift in anthropology away from seeing 'primitive' people as an illustration of social evolution towards greater awareness of the global impact of the western world. He avoided the primitive/modern conundrum by recommending a dual approach (1982, 7): "formalist fundamentals are appropriate to the study of ceramic production and exchange in complex societies where a market economy was in some measure operative, but substantivist principles could be relevant in assessing anomalies".

Peacock's modes of production fall into three groups:

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<tr>
<th>Mode</th>
<th>Genesis</th>
<th>Applicability to Roman pottery</th>
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<tr>
<td>1. Household production</td>
<td>Marx/economic anthropology/ethnoarchaeology</td>
<td>Negligible</td>
</tr>
<tr>
<td>2. Household industry</td>
<td>Economic anthropology/ethnoarchaeology</td>
<td>Frequent</td>
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<td>3. Individual workshop</td>
<td>&quot;</td>
<td>Very common</td>
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<tr>
<td>4. Nucleated workshop</td>
<td>&quot;</td>
<td>Frequent</td>
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<tr>
<td>5. Manufactory</td>
<td>Marx/Industrial Revolution</td>
<td>Rare</td>
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<td>6. Factory</td>
<td>&quot;</td>
<td>Non-existent</td>
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<tr>
<td>7. Estate production</td>
<td>Roman archaeology/historical archaeology</td>
<td>Frequent</td>
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<td>8. Military/official production</td>
<td>&quot;</td>
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While the first group (modes 1-4) has clear ethnographic analogies, the second (modes 5-6) consists of types of production familiar to modern economic writers. Modes 1-6 are arranged according to their increasing complexity and labour requirements in the manner of 19th-c. social evolutionary schemes. The final group (modes 7-8) derives from Peacock's knowledge of Roman ceramic products, such as tiles and amphorae, whose stamps reveal origins of this kind.

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46 Peacock 1982, xii: "If I have shown that the living but rapidly dying tradition of pottery-making is as vitally relevant to the historical archaeologist as to the prehistorian, I shall be content".
47 International headlines about the exclusion of South Africans from the 1986 World Archaeological Congress at Southampton demonstrated that archaeologists and anthropologists could no longer separate academic work from its political context (Ucko 1987).
48 Peacock (1982, 50) downplayed the evolutionary aspect: "the production of pottery has been described in a hierarchical scheme progressing from simple to more complex organisation. It must be stressed that the modes of production and their variants cannot be seen as the 'stages' of an evolutionary system, for industrial arrangements merely reflect social and economic organisation".
Despite the diverse origins of his modes, and a number of criticisms of them, they have perhaps become more definitive than Peacock intended.\(^\text{50}\)

In addition to the sociological/anthropological models designed by Hopkins and Peacock, spatial models were borrowed from geography in the 1960s to exploit the new availability of computers. Before Hodder turned to post-processualism in the 1980s, he carried out interesting work (e.g., 1974) relating production centres to markets and distributions. More recently, J. T. Peña (1999, 30) has applied a spatial approach to the provision of pottery to the city of Rome, which he divided into 5 zones whose form was defined by factors such as transport costs, with supply zones “running around the city, each with spikes radiating outward along the major paved roads, with the suburban zone also perhaps possessing a spike running up the Tiber Valley”. C. Carreras Monfort’s computer simulations of pottery distributions in Roman Britain (1994, 97-98) also employed a general model about rational transport costs, and generated specific models about individual categories, from cooking pots to olive-oil amphorae. B. Dufay, Y. Barat and S. Raux (1997, 158) applied an abstract spatial approach to a production site in Gaul in pursuit of “une véritable ‘archéologie des espaces’ dynamique, cohérente et quelque peu représentative de la complexité du monde”.\(^\text{52}\)

In all cases, the aim of models is to find some symbolic system which will allow complexity to be reduced to a comprehensible number of variables whose interactions can be represented in a hierarchical relationship. Anthropology provides further models that attempt to isolate patterns of behaviour and detect their expression through material culture. M. Bats’ study of Hellenistic and Roman pottery from Olbia (Provence) approaches ceramics through models of food preparation and consumption drawn from J. Goody’s classification of cultures of cuisine, and C. Lévi-Strauss’s “modalités de transformation” involved in converting raw to cooked food.\(^\text{53}\)

R. Bagnall and W. Scheidel’s diverging opinions about indicators of plague in Roman Egypt generated in JRA 2002 a fundamental discussion of models and causality which underlined the difference between a scientific hypothesis and a historical model. The former is normally generated by the gradual elimination of earlier (more general) hypotheses through falsification, while the latter is unavoidably derived from preliminary investigation of the very evidence against which it will have to be tested. In addition to analysing the nature of models and modes, it is important to scrutinise proxy evidence, since this concept is regularly employed in the economic interpretation of material evidence.

**Proxy evidence**

Because Britain is poorly served by documentary evidence and inscriptions, Romano-British sites and artefacts (including ceramics) have been actively investigated for more than a century. We now have a good understanding not only of general trends, but also the trajectories of individual Romano-British pottery-manufacturing centres and the distribution of their products.\(^\text{54}\) Fulford, who has written more about the Romano-British economy than any writer since Collingwood, has made confident use of material culture.\(^\text{55}\) His survey published in 1989

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\(^\text{49}\) Peacock (1982, 6) quoted Binford in support of his need to formulate models “in a theoretical calculus some of which may deal with forms without ethnographic analogy”.

\(^\text{50}\) Concisely summarised by Tyers 1996, 35.

\(^\text{51}\) E.g., Peña 1999, 29: “as Peacock has shown, there were several distinct modes of organization for the production of pottery in the Roman world”. Wild (2002, 28) preferred to employ Peacock’s scheme as a ‘stalking-horse’.

\(^\text{52}\) GIS is likely to stimulate new interest in designing and analysing spatial models: Greene 2002a, 77-81.

\(^\text{53}\) Bats 1988, 25 and 22, fig. 2. Assumptions about the stability of food consumption and table habits over long periods, and constancy in categories of pots used for cooking (Bats 1994, 407-24) have been contested by Rivet 1996.

\(^\text{54}\) E.g., the New Forest and Oxford pottery industries (Fulford 1975; Young 1977); see Tyers 1996 for many other examples.

\(^\text{55}\) In 1989 Fulford reflected upon evidence recovered since the 1960s, and in 1991 he surveyed Britain’s
began optimistically (1975, 175):

Our understanding of the economy of Roman Britain has surged so far ahead over the last ten to fifteen years that it has become practicable to attempt a synthesis for the first time. This is due to a number of factors, the first of which has been a general rise in interest in the economic affairs of the Roman world. This has had a particular value for our assessment of the British situation, for it has not only generated models which can be tested against the British evidence, but it has also offered a central perspective on ideas developed in isolation on the basis of British data alone.

Reference to “ideas developed in isolation on the basis of British data” suggests objective data-collection, combined with confidence that archaeological finds provide an independent discourse that can inform historical explanation. Fulford’s publication about the economic relations between Britain and the rest of the empire (1991) demonstrated full awareness of the technical problems involved in gathering and analysing archaeological evidence. Nevertheless, there remains an unstated assumption that a rational correspondence exists between artefacts, economic systems and the historical framework, and that this permits ‘pars pro toto’ explanation. Like many others, Fulford (2004, 314) uses proxy evidence as a rhetorical device:

In the absence of much specific surviving evidence for subsistence foods, such as cereals, or a means of establishing whether they were imported or not, some attempt has been made to exploit the potential of the proxy evidence of other materials, particularly pottery, in trying to determine the patterns of flow of perishable goods.

But what exactly is proxy evidence? All of the definitions in the Shorter Oxford English Dictionary involve delegated authority, and a formal connection between one thing and the proxy that is acting on its behalf. Archaeologists will be most familiar with the term in the context of environmental reconstruction, where the dependency of the proxy is explicit. Climate is an acknowledged phenomenon (albeit a product of many variables) but its existence can only be detected through its effect on other things (rainfall, ocean temperature, sedimentation, plant ecology, tree growth, etc.). Thus, climatic reconstruction is based upon the observation of proxies such as variations in the width of annual tree rings, differences in thickness and chemistry of layers extracted from ice cores, or the advance and retreat of glaciers. The ‘Roman economy’ is not a natural phenomenon or set of variables analogous to climate. Unlike weather and tree-ring growth, no direct causal connection exists between the workings of an economy and the deposition of potsherds on archaeological sites. Thus, the term ‘proxy evidence’ may promote an unduly optimistic expectation that material evidence can be used directly for ‘reconstructing’ the economy. Perhaps we should describe such evidence as an “indirect analogy” rather than a proxy.


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56 Fulford 1991, 35: “The chief limitations of archaeological evidence include, on the one hand, the relationship of what survives in the archaeological record with what was originally traded and, on the other, the comprehension of the systems responsible for the movement of goods”.

57 Wild 2002, 27-28: “the pottery industry has increasingly been used pars pro toto to reconstruct the face of the provincial economy”.

58 Further examples occur on pp. 312, 313 (twice: artefacts and seeds) and 322 (coinage).

59 5th edn. 2002, 2385: e.g., “The agency of a person who acts by appointment instead of another; the action of a substitute or deputy”; “a document authorizing a person to vote on behalf of another”.

60 Greene 2002a, 187, table 5.1.

61 Amphorae can be accepted as proxy evidence for the distribution of wine, oil, fish sauce, etc., as long as recycling and re-use before deposition are taken into account.

62 Echoed by Woolf 1998, 186: “ceramics are capable of enormous differentiation... Pottery thus makes manifest a series of social categories and claims about status that are inaccessible through most other
reconstructing the history of harbours at Caesarea. While accepting that pottery “provides a rough indication of changes over time in the intensity of trading activity”, his optimism about this “very positivist assumption” dims when set against the much larger questions that can be asked about the site (365-66):

Can these data be used to deduce Herod’s intentions in building such a grand harbor, the aspirations, setbacks, and the responses of the rulers and administrators who succeeded him, and the macroeconomics of Sebastos and Caesarea in the Mediterranean world?

J. Lund voiced similar concerns about the interpretation of changes in fine wares in SW Western and S Asia Minor, hoping that (1996, 113) “a slowdown in economic activities ... may be better reflected by the ceramic fine wares than by other classes of evidence — such as portrait statues — because it hit the pottery-using ‘man on the street’ harder than the upper classes”.

Having explored the theoretical context of model-building and proxy data, it is time to restate the question asked earlier: what might readers learn about the economic interpretation of Roman pottery from recent articles and reviews in JRA or Britannia?

Contrasting interpretive frameworks

The economics of pottery in Britannia


In general, lamp usage in Roman Britain in the first century A.D. is clearly linked to military sites and large urban centres ... The strong military influence is obvious and it appears that lamp production relates to a cultural milieu of people already accustomed to the use of lighting equipment. ... [In Colchester] local production appears to have filled a gap once the army and its supplies had moved on but while there was still a desire for this very Roman form of artificial illumination.

These ideas about consumption are associated with Romanization, led by soldiers and city-dwellers.64 Eckardt added the dimension of import substitution, prompted by the idea that Colchester was no longer included in a military supply-system.65 How close were connections between military occupation and ceramic supplies in Britain? Fulford’s overview of Britain’s external trade (1991, 46) drew a distinction between an early period, characterised by extensive imports (driven by military spending), and a later period of greater isolation, but did not separate military supply from civilian. The complex development (with little military influence) of eastern and western terra sigillata and Red Slip Ware production-centres around the Mediterranean reminds us to be careful about the identification of factors influencing changes in Romano-British material.66

In a second paper on pottery production in Britannia 2002, Gibson and Lucas presented information about kilns from a large excavation at Greenhouse Farm in Cambridgeshire (2002, 117):

63 She has also written an insightful monograph on lighting in Roman Britain (2002b).
64 A similar interpretation of the (thin) distribution of Lyon ware in Britain has been proposed by Willis 2003.
65 Import substitution in ceramics has also been taken to indicate economic development by Fentress et al. 2004, 552.
In summary, the production, distribution and consumption of pottery in the pre-Flavian period was, as in the Late pre-Roman Iron Age, largely local. In particular, the potters tapped into pre-existing social structures of communal gatherings where they could produce and distribute their wares at the same time to a local population. It was only in the last decades of the first century that more established production centres emerged along with new distributive and economic patterns. This changing social context of production is directly reflected in the ceramics themselves, in the increased standardization of wares and in their larger scale distribution.

Like Eckardt, the authors discuss consumption, but Gibson and Lucas give it even greater prominence. Considerable emphasis is placed upon social aspects of production and broader cultural changes undergone by Britain in the 1st c. A.D. Why did Gibson and Lucas conclude that “potters tapped into pre-existing social structures” and that the “changing social context of production is directly reflected in the ceramics themselves”? Their starting point is a conventional culture-historical classification of the pottery: handmade or wheel-finished/turned vessels in an Iron Age tradition with a limited repertoire; wheel-thrown vessels in typical Gallo-Belgic and Roman forms. A number of interpretations emerge from this basic categorisation. One is short-term use of the site by itinerant potters, related to Peacock’s modes of production; a second is the influence of the Roman army, prompted by comparisons with sites such as Longthorpe, where production took place close to a large military establishment. Most weight is given to the social context, inspired by an interest in consumption and the wider socio-economic changes brought about by the Roman conquest: “it matters less who the potters were than in what context they made their pots” (2002, 110).

This concern with context marks a shift away from conventional publications of Roman pottery manufacturing sites, and leads to an incremental sequence of interpretations that go beyond Peacock’s production-centred ethnoarchaeological models. Faunal and botanical remains indicated that Greenhouse Farm was not an abandoned Iron Age site, and this evidence pointed to “something special rather than basic subsistence” (2002, 111-12).

Lying between major tribal divisions, these regions could have occupied an unusual cultural position, mediating inter-tribal exchange networks. Greenhouse Farm may have hosted seasonal, communal gatherings (rather like medieval or modern fairs) for any number of diverse purposes (e.g. marriage, exchange), but which also included the production and distribution of pottery (ibid. 112-15).

These anthropological ideas emphasise the conceptual difference between Gostencnik’s bronzemith, operating in a market economy, and Gibson and Lucas’s Romano-British potters, acting as part of a community pattern of production and consumption (2002, 116). The contrast resembles the 19th-c. conflict between industrialisation and traditional crafts, epitomised by Ruskin and Morris’s attempts to preserve the moral value of the latter.

The economics of pottery in JRA

JRA occupies a distinctive position between JRS (which retains a literary/historical emphasis) and geographically defined periodicals such as Britannia. It includes Roman archaeology in its broadest sense, and review articles and book reviews of sufficient length to allow detailed discussions of methodology and theory. Roman ceramics have made a modest contribution to JRA since R. Tomber’s important papers published in 1990 and 1993, but vol. 14 included a valuable presentation of pottery production at Pergamon and Sagalassos (Poblome et al. 2001) and a sensitive analysis of indigenous ceramics found on a military site at Cologne (Carroll 2001). I will consider some pieces in vols. 15 and 16 (2002 and 2003) to gain insights into current

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67 Consumption is a more varied area of behaviour than production in studies of early modern economics (e.g., Brewer and Porter 1993).
68 Unlike most Romano-British pottery specialists, Lucas (2001; 2005) is conversant with prehistory, modern-world archaeology and ‘post-processual’ theory.
69 Lucas 2001, 62 notes that: “We still use typologies and systems of classification developed in the late nineteenth century and we still use regional culture differences inherited from the earlier twentieth century. The history of fieldwork is one of continuities and change and it is important to see the two together.”
approaches to ceramics.\footnote{JRA 17 (2004) reached me after this paper was substantially complete; it does not include articles of direct relevance to the economic interpretation of pottery, but there are several pertinent book reviews.}

A substantial paper by M. Mackensen and G. Schneider (2002, 121) concentrated on reinforcing "our knowledge of the production, chronology, and distribution area of N. African sigillata", and the outcome of this fruitful exercise was that "with the aid of comparative chemical analysis and the reference groups available here, not only regional attribution is possible, but the place of production can now be identified with a high degree of probability" (142). It claimed (accurately) that such work was fundamental to any economic analysis of local and regional markets, and the distribution of the finest wares across the Mediterranean basin (121):

This is the prerequisite for, and the basis of, chronologically differentiated distribution maps and comparative analyses of urban and rural markets in the provinces of Africa Proconsularis, Byzacena and Tripolitana, as well as for reconstructing the mechanisms governing delivery to and supply of large cities such as Carthage.

Scientific work of this kind in the field of Roman ceramics is familiar from studies of amphorae, but Peacock remains unusual in having integrated scientific analysis into books about the Roman economy.\footnote{Peacock 1977; Peacock and Williams 1986.} The authors of this paper did not explore the resulting patterns, perhaps because Mackensen had already proposed elsewhere that African Red Slip Ware production at El Mahrine (N Tunisia) took place on a large Late Roman estate, with an eye to profit.\footnote{"... eine gezielte, privatwirtschaftliche Unternehmung und gewinnversprechende Investition eines Großgrundbesitzers": Mackensen 1993, 486.} While interpretation of this kind is welcome in a specialised monograph reporting on fieldwork, it would be even more valuable in a periodical with a wider readership.\footnote{The importance of lengthy reviews in JRA, where such observations can be drawn to the attention of the periodical's wider readership, is reinforced — for example, by Oleson's review of a monograph about Nabataean fine wares (2003).} A different kind of paper on African Red Slip Ware in JRA 16 discussed evidence for an early 5th-c. A.D. consular diptych in the unusual setting of a pottery workshop (Spier 2003, 354): "its presence there [N Africa] should not be surprising in view of the many wealthy Roman families, including the Anicii, who held estates there". J. Spier hinted at the economic implications but did not refer specifically to Mackensen's perception of the importance of estate-owners.\footnote{It is not uncommon for reports about pottery production centres to be published separately from economic discussions about them; thus Poblome et al. (2001, 143-44) condensed the genesis of eastern sigillata manufacture into three paragraphs of a paper about production sites in JRA, but elaborated it in the less-readily-available ActaRCRF (Poblome, Brulet and Bounegru 2000).}

For several decades S. von Schnurbein has made exemplary use of ceramic evidence in the study of Augustan sites east of the Rhine; his paper in JRA 16 examined architecture and artefacts excavated at Waldgirmes, and included some observations about pottery (2003, 103-4):

Particularly striking is the amount (some 20%) of handmade Germanic pottery at Waldgirmes. ... We can hardly doubt that these native clay pots are an indication of intense contact with the local population, and we can safely assume that such individuals lived and worked at the base. ... Thus there is no reason not to classify the base at Waldgirmes as a polis and the forum building as an agora. If this term fits the type of building here, the variety and quality of pottery production at Haltern could correspond to the other meaning of the word agora, a market.

In this text-aided culture-historical approach, military, civilian, Roman and German are perceived as distinct categories that will be reflected in archaeological remains. It would be interesting to read a closer economic analysis of the categories of Germanic pottery involved, following the example of M. Carroll's thoughtful study of native Belgic, Frisian and Germanic pottery at the base of the Classis germanica at Cologne, which she approached (2001, 324) in terms of "indicators of interaction, contacts and trading systems involving the Roman military and native groups".
Further examples of the interpretation of ceramics are scattered through the review volumes of *JRA* 15-16. The economic/industrial character of Mackensen and Schneider's approach is echoed in a review of H. Raab's *Rural settlement in Hellenistic and Roman Crete*. G. Harrison and J. Francis (2003) would have liked greater use of ceramics in the investigation of central questions about Romanization and the relationship between urbanisation and agricultural production, but praised Raab for having integrated fabric analysis and field-survey data into an economic and cultural framework. Wider implications of ceramic production and distribution for social relations and consumption were also explored in Oleson’s review of Nabataean fine wares from Petra (2003, 655-56):

A standard study of a ceramic tradition ... might have ended at this point. Schmid, however, asks difficult but fascinating questions about the origin of the Nabataean fine ware tradition, which seems to appear suddenly and out of nowhere. ... As always, Schmid brings the discussion back from ceramic typologies to their significance for our understanding of trade, cultural influence, and historical events. ... According to him, they were used both for sacred and secular drinking activities, particularly the symposium, and probably were a substitute for gold and silver cups used by the nobility. ... The sudden change in ceramic styles in the mid-1st c. B.C. was paralleled by the equally dramatic appearance of Hellenistic influence on Nabataean tomb architecture and architectural ornament.

The aspect of Schmid’s work most appreciated by Oleson is the use of ceramics and other material culture to measure the impact of known historical events and processes. As at Waldgirmes, a culture-historical approach of this kind works well at the margins of the Roman Empire where identities may have been strongly demarcated, but might be less convincing in the core provinces. Such studies of the function of artefacts in social and cultural terms reflect the influence of anthropology on prehistoric and historical archaeology in recent decades, along with greater sensitivity to the relationship between ceramics and metalwork that has emerged from the study of Greek vases.

Not all commentators on work with ceramics are complimentary. Carroll’s review of a volume of *Kölner Jahrbuch* is most enthusiastic about “those [papers] that deal with specific artefact categories from excavated contexts” — the majority of which are about pottery — but asks (2003, 642) “do these studies contribute to a deeper understanding of Cologne as a provincial capital? Do the authors demonstrate how artefact studies can be used to explore aspects of the historical and cultural development of the city?” One paper is castigated (643) for failing to take account of “the literature on the social and cultural meaning of artefacts and the role of consumer choice”. Carroll reached a depressing conclusion (644):

In general, the papers reflect a rather old-fashioned approach to archaeological material and its interpretation. Most do not appear to have in mind research questions designed to explore the historical, cultural, social and economic development of this major urban centre on the Lower Rhine. ... One cannot help but wonder whether the funds might not have been better spent on inter-related research projects or on the proper evaluation and excavation of endangered sites in the city.

Dissatisfaction is also expressed in E. Fentress’s review of the excavation report on the Roman villa at Poggio Gramignano in Italy (2003, 550-52):

... the published work should contain syntheses for the ordinary, interested archaeologist, with illustrations limited to exemplary forms or new typologies; the detailed evidence, particularly locus lists, tables, the weights of individual sherds — possibly of interest to no-one but the person preparing the report — should be archived, or presented on the Web as data-base files, thereby saving paper, production costs, and weight, not to mention outbursts from irritated reviewers, while still allowing others to examine the data with new questions in mind.

It is clear from the extended discussion of this excavation report, as well as from Fentress’s other publications, that she had hoped (552) to find economic observations of the kind praised

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75 E.g., Hodder 1982.
77 E.g., Fentress et al. 2004.
by Harrison and Francis:

What is important about the African Red Slip from the site is not that it was there, but that there is so little of it. ... This suggests that, while ARS was still readily available on the Italian coastline, it penetrated less easily into the interior, even up the Tiber. On the other hand, the ability of the area to replace this import, and even to export it to Rome, suggests a still-vibrant economy, as does the regional production of cooking wares ...

Here we have a range of concepts (replacement of imports, vibrant economy, importance of industry in the local economy) that material evidence may be marshalled to support. It still makes the assumption that ceramics are a reliable form of proxy evidence for economics, however.

Pottery crops up in a different methodological form in H. Eckardt’s review of a catalogue of lamps from Glanum. She makes an important point about the nature of site finds (2003, 595):

It should be noted that the observed decline in lamp usage after the 1st c. A.D. also occurs in other provinces, notably Switzerland and Britain, and thus may not be related to the individual fate of a specific site at all. Rather, it may relate to patterns of supply and demand for lamps in Rome’s provinces where lighting equipment was only ever used on a much more restricted scale than in the empire’s Mediterranean heartland.

This point has already been appreciated in studies of terra sigillata and numismatics. The implications for the interpretation of individual excavations or fieldwork projects are serious: how far do the relative quantities of pottery from different sources reflect the individual histories of sites or localities, and how far do they represent a background pattern? Some examinations of quantities of wares and vessel types on British sites indicate that individual samples are influenced by the geographical, economic and social status of the site, as well as the availability of pottery. The idea that pottery provides a straightforward proxy for economic activity is undermined by statistical problems of this kind.

Thus JRA and Britannia feature ceramics in a number of contexts, but in JRA economic dimensions are often presented more directly in reviews rather than in articles. It is instructive to compare them with a specialist periodical about Roman pottery.

The economics of pottery in the ActaRCRF

Rei Cretariae Romanae Fautores, an international group of ceramic specialists formed in the 1950s, publishes Acta containing (for the most part) papers given at its biennial congresses. Most papers in vol. 36 (based on a meeting in Turkey) made confident use of ceramics as proxy evidence. The majority were concerned with cultural rather than economic interpretation, and used pottery as a key to understanding East–West interactions in general, and Romanization in particular. One clear example can be found in a study of fine wares from Alexandria (Elaigne 2000, 21-23):

The last Hellenistic context ahead of the imperial period in Egypt is marked by the widespread imitation amongst local products of eastern fine ware traditions, such as black-glazed and colour-coated wares, transitional lamps and unguentaria. The occurrence of some Italian elements such as
Pompeian Red and thin-walled ware before the arrival of Arretine sigillata demonstrates the earlier interest which was directed toward the Roman world. ... Considering all of the fine wares together, the process of Romanization is reflected by the increase of all imports, which dominate in the Augustan period and even more so in the Tiberian period. But from the reign of Tiberius, imports whose morphological repertory comes from a Roman tradition have more often an origin in the Eastern Mediterranean area, and the local copies are taken over diffidently from those; this indicates the spread and the taking root of Romanization in the East.

This passage is reminiscent of Walters’ vision of the history of Greek and Roman politics and art epitomised in pottery; such direct reading of the meaning of ceramics is modified by J. W. Hayes in a paper about trade (2000, 286):

How, then, should we define the term ‘Roman pottery’ for the eastern Mediterranean? The trading concept of mare nostrum, documented by a thousand or so shipwrecks, embraces a much broader time-span than in the northern regions of the empire, where we work traditionally within our limits of c.50/30 BC and AD 400/410. Another time-frame, c.200 BC-AD 700, can be suggested ... Here we meet a conceptual problem — not helped by those who define their periods only in terms of political history. The term ‘Hellenistic’ (not an ancient term!) is really valid, in pottery terms, only in the Aegean region, and for decorated or black-gloss fine wares and the major categories of amphorae (mostly stamped). Thus in Athens one can note occurrences — but not many — of the classic Augustan ‘Roman’ fabrics in earlier Augustan times; however, the Ephesian and other Eastern products more common in this phase have antecedents.

Hayes’s ‘conceptual problem’ is the same question about the relationship between material evidence and historical interpretation that was examined in the discussion of proxy evidence.

Among other papers that consider East-West relationships, one (by Poblome, Brulet and Bounegru, the excavators of a pottery production centre at Sagalassos in Asia Minor) takes a broad view of the phenomenon of sigillata tablewares, but avoids simplistic political-cultural correlations linking “the political events of the late Hellenistic period with possible changes in the socio-economic landscape, which may have had an influence on patterns of exchange of goods, people and ideas” (2000, 279). This non-causal point of view leads to interesting observations about innovation that are rare in studies of change in archaeology, and (using the case of Gaul) the authors argue against linear evolutionary interpretation (280-81):

... the old model of linear development from the existence of pre-sigillata before the arrival of Italian tablewares, followed by the commercial success of Italian sigillata, which is followed by the production of Italian sigillata in Gaul, is no longer credible. Data from consumption sites clearly point to the complexity and the specificity of events as well, involving intricate patterns of exchange of goods and people.

This broader concept of the cultural context gains support from G. Woolf’s (1998) work on pottery in Gaul, but finds a different form of expression in terms of ethnicity and identity by E. Kreković, who used ceramic trade to distinguish levels of Romanization amongst Germans north of the lower Danube (2000, 261-62):

The case of the Sarmatians shows that the nearness of the Limes alone is not a sufficient reason for importing pottery to barbaricum. But Roman pottery appears in their territory in much smaller quantities than amongst the Germans. ... To sum up, the cultural influence of the Roman Empire was more asserted in the regions north of the Danube. Indeed, just to visit a big Roman town in order to obtain pottery must have impressed the barbarians very strongly. Therefore I regard just the mass appearance of pottery as the best evidence of the partial romanization of Germans living close to the Roman frontier in the Middle Danube region.

An expectation of direct correspondence between cultural identity and the purchase of ceramics, like Hayes’ definition (2000, 286) of “Roman and Greek culture-zones”, invites comparison with the culture-historical approach of V. G. Childe. Kreković’s employment of ceramics for ethnic differentiation contrasts with von Schnurbein’s (2003) use of Roman and Germanic categorisations to assess the function of individual Augustan sites east of the Rhine,
rather than to characterise the cultural status of the region. A more elaborate differentiation of relationships between the Roman army and frontier peoples at Cologne has been achieved by Carroll (2001). Expectations that ceramics should reflect ethnicity in addition to economics underlies many other studies — for example, Tel Anafa in Israel, where "the study of the Hellenistic and Roman common wares ... demonstrates the usefulness of utilitarian wares for determining otherwise undiscernible ethnic affinities and changes in subsistence strategies" (Herbert 1997, 1).

In addition to general considerations of sigillata and regional trade, ActaRCRF 36 contained a distinctive local study. S. Bianchi (2000, 561-63) reviewed Pantellerian ware "per verificare un modello economico" because this range of cooking vessels had been selected as an illustration of a household industry by Peacock. She explained how ceramics of this kind were both more plentiful and more widely produced than hitherto realised, and drew attention to the existence of other widely distributed local products — e.g., amphorae containing alum for treating animal skins, and obsidian for making sharp surgical instruments — alongside which this pottery could have been traded. This sheds rather different economic light upon the production of Pantellerian ware. Thus, new information about a location where pottery was produced may have significant effects upon the perception of the economic context of manufacture. Rather than an emergency product made by hard-pressed marginal farmers, Pantellerian ware now sounds more like Black Burnished Ware from SW Britain, hand-made in large quantities by potters in a local indigenous tradition and fired in bonfires. The coastal location seems to have favoured selection for expansion and wide distribution (presumably along with agricultural products), and like Pantellerian ware, the products reflect historical and geographical contingency more than a mode of production.

Thus, the ActaRCRF show that pottery specialists do use ceramics for economic interpretation when communicating with colleagues in a journal read by pottery specialists, but tend to leave their approaches to economic history implicit. Poblome and his co-authors (2000, 282) interleaved statements about the Roman economy with evidence from ceramics without stating the precise relationship between them:

The pax Romana brought about new economic possibilities throughout the empire ... After the prelude in the Hellenistic east and apparently also in the west, sigillata clearly developed into an Italian phenomenon ... making sigillata a cultural phenomenon of the Roman commonwealth from the Augustan period onwards. ... We believe this ceramic phenomenon of integration is part of a much more developed socio-cultural, economic, religious, administrative and military pattern of exchange, involving a variety of other goods, people and ideas.

Hayes is more explicit in arguing that pottery provides solid data for economic interpretation, and in building up a general picture in steps (2000, 289):

We should be asking, what are the percentages of local v. imported wares (in each broad category: fine wares, coarse wares, amphorae, etc.). And, in the context of fairly free trade (the mare nostrum), one poses the theoretical question: how much is arriving from north, south, east and west in each major period? Or, in a Mediterranean context, how much along the coast, across the open sea, or overland? ... And without such figures, how can we really explain the Roman economy? ... Pottery exports, whether as trade items in themselves or as simple containers, though not particularly important in overall ancient financial terms, have significance for us from their bulk (and their durability as evidence). They provide proof of the commercial integration of the later Hellenistic and Roman Mediterranean world through to the 7th century AD.

84 "In alcune pagine del suo celebre libro ... D. P. S. Peacock fa della ceramica grezza di Pantelleria un caso esemplare di produzione ceramica domestica (household industry) all'interno del modello etnografico dell'occupazione insulare, secondo il quale "an infertile island where farming is difficult is exactly the environment in which household industry is liable to develop" (561).

85 "Nell'individuazione di quei circuiti ‘minorì’ dell'economia antica, rivelatori di complessi meccanismi di gerarchizzazione, scambio e interrelazione fra centri indigeni minorì ed aree urbane" (563).


87 An advantage of Peacock's clearly defined models is that they can be tested in this manner.
I share Hayes' optimism, but am aware that it may involve circularity: archaeologists find lots of pottery everywhere; this must be the result of "fairly free trade"; free trade allowed pottery to travel widely and in quantity; Finley demanded evidence for commercial integration if the Roman economy were to be considered anything more than "primitive"; the wide distribution of pottery demonstrates both free trade and commercial integration: QED. My own *The archaeology of the Roman economy* also sought evidence to support the preconception that Finley's minimalist interpretation did not accord with the character and distribution of Roman ceramics revealed by Hayes and others.

Conclusions: from methodology and theory to interpretation

There has been a gradual shift in the consensus about what archaeologists expect pottery to tell them. Walters sought to reinforce an idea of decline from Greece to Rome; the Geological Survey and the V&A Museum sought technical and artistic ideas that could be put to good use in industry; Collingwood and Gillam established type-fossils that could allow excavators to cross-date and synchronise periods of occupation on excavated sites; Peacock measured Roman pottery industries on a quasi-evolutionary scale of economic complexity while attempting to record dying craft-production around the Mediterranean. My own interest in economic interpretation arose from the processual archaeology of the 1960s and its immediate aftermath,\(^8\) while my (arguably pedantic) analysis of vocabulary and metaphors reflects a post-modern concept of the 'past-as-history'.\(^9\) The agenda of post-processual archaeology and cultural history leads me to hope that ceramics may also unlock wider human experiences of consumption and social interaction.\(^9\) However, none of these pursuits can be conducted without the valuable legacy of processualism — rigorous methods of excavation, recording, quantification and analysis, combined with a deep understanding of production technology.\(^9\) Insuperable problems in selecting and testing data in an 'objective' manner, unavoidable circularity in the design of models, and logical problems in the use of proxy evidence should not inhibit us from thinking harder about our approaches. Nevertheless, Peña (1999, 29) has reminded us that, whatever economic interpretations we derive from ceramic evidence, it "almost certainly played a rôle of only minor significance within the Roman economy. ... At Rome, certainly, the pottery trade cannot have represented more than a tiny fraction of overall economic activity". With that proviso, what hopes do I have for the future?

Like the primitive/modern debate or 'Romanization', economics remains on the agenda in studies of the Roman world (or longer-term economic history), although it is increasingly embedded in broader cultural approaches. Once rigorous methodology and data-analysis have been applied, the next essential requirement is an overtly reflexive approach to interpretation. It should be possible for writers to explain the affiliation of their own views about the ancient economy — Finley or Rostovtzeff? Binford or Hodder? free markets or embedded exchange? evolution or revolution? — and to reflect upon the reasons underlying their point of view, rather than implying that those views emerged objectively from the observation of pottery. This does not require compromise; J. Bintliff (2000, 161) has recommended a variety of discourses appropriate to different archaeological problems that allow you "to be both a processualist and a post-processualist — and without sacrificing your commitment to treasured standpoints associated with each position".\(^9\) He has also (1999; 2004) advocated the *Annales* approach, in

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\(^8\) E.g., Greene 1982.

\(^9\) E.g., Greene 2002b.

90 “In producing artefacts, as well as in exchanging them, a whole series of social relations is set up. However, the production process is never one-way: people are produced through interaction with the material world as well as things”: Gosden and Knowles 2001, 17-18.

91 E.g., Jones 1979; see Peña 2004 for exasperation about a failure to employ established statistical quantification methods in the publication of Roman pottery.

92 The discourses which offer most potential for ceramics are the science discourse (for measuring and describing), the functionalist discourse (for studying human adaptation to social structures), and the politi-
which actions and processes — some short-term, many long-term and invisible in human lifetimes — produce historical outcomes through the interaction of structure and contingency.

Thus, diversity becomes a virtue, not a defect, and multiple discourses may be woven together to produce a composite representation of the past. If you want to think about who made and used terra sigillata, go back to Rostovtzeff’s social history (1926), in addition to reading Fülle (1997) and Poblome (1996); but also take a look at kiln-site evidence from Asia Minor (Poblome et al. 2001) and consider the political and social circumstances that facilitated the emergence of Wedgwood’s mass-produced tablewares in the 18th c. (Smith 2002, 240-42) — and remember that slavery was a factor in both periods. In order to understand the co-existence of traditional handmade ceramics and elaborate moulded workshop products, consider Finley’s minimalism and the substantivist perspective of Polanyi, place Peacock’s modes of production alongside Hodder’s symbolic and contextual observations, ponder the relevance of Bats’ studies of eating habits and cultural identity, and wonder about the subversion of mainstream items into non-Roman practices (Hunter 2001). When thinking about markets, study Peña’s scrupulous analysis of pottery from the Palatine in Rome, where rational models of workshop location take account of distortions caused by free distributions of foodstuffs. Consider the implications of military garrisons and troop movements, and patterns of ownership and management of Roman agricultural estates. At all times bear in mind the interactions between ‘Roman’ and other traditions that took place in an expanding empire — without using the term ‘Romanization’ as a substitute for deeper analysis. Set the micro-regions of P. Horden and N. Purcell’s Corrupting sea against world-systems or core-periphery models, and set the longue durée of Braudel’s writing about the Mediterranean against straightforward narrative history.

This may sound a tall order for Roman ceramic specialists, whose rank in the hierarchies of excavation and fieldwork staff has never been elevated, but Woolf (1998, 186) has demonstrated that receptiveness to ceramic evidence can be high amongst ancient historians. Increased self-esteem amongst pottery specialists might bring to the surface thoughtful economic and cultural discussions that are currently rather difficult to locate in excavation reports and specialist periodicals; this might encourage them to contribute broader papers to JRA. Their speciality would simultaneously become more satisfying in itself, and make a higher-profile contribution to the overall interpretation of a project.93

Papers and reviews about other forms of material culture in JRA 15-16 reveal that studies of ceramics do not employ such a wide range of interpretations, and that different kinds of explanation might be added. For example, D. Perring (2003) criticized a book about late Roman villas in SW Gaul for neglecting ideological arguments relevant to the display of élite status, and expected such things to be reflected in the physical form of architectural structures and their adornment. Concern about identity or politics in studies of ceramics is generally aimed at detecting military production or ethnicity. Further questions about the nature of material evidence crop up in art-historical discussions in JRA. Reviewing a book about Nilotic scenes in Roman art, R. Tybout (2003) congratulated M. Versluys on using “copious comparative material from later periods and modern anthropological theory” (507), and described it as “an exemplum of how our silent archaeological witnesses can be made to speak in a variety of fresh and captivating discussions” (515). B. Ewald (2003, 570) called for breadth of vision in the context of Roman sarcophagi, inviting us to consider how “the mental and psychological, rather than the sociological and biographical, implications of such imagery, might supplement the socio-historical approach”. It will not be easy to extend the interpretation of ceramics into such areas, but subtle social and gender relationships associated with ceramics in 18th-c. Europe might encourage Roman specialists to make their ‘silent archaeological witnesses’ speak:

call discourse (for discussing ideological language) (2000, 163-64).

93 E.g., Greene 1984, a general paper about the results of specialist work on excavated ceramics published long before the site report appeared.
...china is much more than a metaphor for the female condition. It is also a crucial reminder that femininity is an ongoing historical construction, one subject to changing economic interests and pressures. The transformation of the female as object to the female as subject involves well the historical construction of woman as consumer: in an age when a woman’s “duty” increasingly involved her management of household resources, female patterns of consumption became a statement about a woman’s identity.⁹⁴

In JRA 16 M. Bradley was criticised by A. Wilson (2003) for his treatment of empirical evidence about fullonicae, but his challenge to the “fantasy reconstruction” of a single narrative from scattered and fragmentary material evidence remains important (2002, 24-25). He underlined the constructed nature of interpretations (hallowed by modern consensus) and highlighted traditional scholars’ antipathy to ignoble topics such as dirt and laundry. Prehistorians and early modern historians (under the influence of anthropology and cultural theory) are further forward in reaching a comfortable accommodation with the physical, gendered body.⁹⁵

Thus, my hypothetical readers of JRA and Britannia would gain a rather puzzling impression of the economic interpretation of Roman pottery. They would encounter both economic rationalism and anthropological contextualisation, along with attempts to match pottery production or consumption to identity (military, social or ethnic) or to that slippery concept, ‘Romanization’. If their attention wandered to papers and reviews about other material evidence (especially in JRA), they might gain the impression that a wide range of interpretations of such evidence were possible. This would match A. Gardner’s reaction to a meeting held to consider the state of Roman archaeology in Britain (2003a, 438; cf. also id. 2003b):

The Roman world’s great diversity of material culture both affords great opportunities for study and begs important questions of cultural identity ... The material impact of the Roman empire is striking not only to archaeologists but presumably was so to those in antiquity whose lives were physically transformed by a new world of objects.

Publications of the Theoretical Roman Archaeology Conference (TRAC) have met this challenge by incorporating approaches to neglected aspects of social and economic life such as consumerism, slavery, poverty, food, or post-colonial theory.⁹⁶ Future volumes of JRA might use new technology to increase space for discussion of the economic (and other) ramifications of excavation, fieldwork, and studies of art, architecture and artefacts, by publishing technical appendices electronically. It is ideas about archaeological information that we are most interested in:

It is these materialisations — of texts and images — which guarantee the validity of archaeological interpretation, not the site itself. ... Without these materialising practices, there would be no archaeology — they allow its discourse to develop. Indeed, the archaeologists’ facts are primarily not sites or artefacts, but the textual and graphic materialisations which stand in for them — from fieldnotes to site reports, from drawings to photographs.⁹⁷

This statement reinforces the post-modern view that what we are studying is not the past and its material manifestations, but their representation in our imaginations or in words and images, selected according to our preconceptions. Thus, if the past (however real or ideal we consider it) is constructed in the present, we must be self-conscious about the basis of our explanations. Roman archaeologists will then cease to be handmaidens to historians, but will collaborate in the more comfortable manner observed by R. Laurence (2004, 111), through “striving to develop answers to different, but relevant questions. ... Where the relationship between the two disciplines goes from here is up to us — and that means you”.

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⁹⁴ Kowaleski-Wallace 1997, 68 (I am indebted to H. Berry for drawing this book to my attention).
⁹⁶ Greene 2005, 7, table 1.
⁹⁷ Lucas 2001, 213-14; the author was a member of the Cambridge Archaeological Unit that excavated and published Greenhouse Farm (above p. 45).
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