THEORY AND PRACTISE IN MEDIEVAL CERAMIC STUDIES*

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Introduction

The relationship between theory and practise in empirical situations is well, if gruesomely, illustrated by Bertrand Russell's story of the inductivist turkey. This turkey found that, on his first morning at the turkey farm, he was fed at 9 am. Being a good inductivist, however, he did not jump to conclusions. He waited until he had collected a large number of observations of the fact that he was fed at 9 am. He made these observations under a wide variety of circumstances, on Mondays and Thursdays, on warm days and cold days, on rainy day and on dry days. Each day he added another small observation statement to his list. Finally his inductivist conscience was satisfied and he carried out an inductive inference to conclude: "I am always fed at 9 am". Alas, this conclusion was shown to be false when, on Christmas Eve, instead of being fed, he had his throat cut. An inductive inference with true premises had led to a false conclusion. The turkey was operating on an inadequate theory of reality.

The aim of this brief paper is first, to examine the relationship between theory and practise in any empirical study and then, to consider how this has a bearing on the study of archaeological ceramics. Questions of research strategy, dating, the interpretation of site function, pottery use, the economics of distribution and production, typologies and publication will be considered in light of this.

What is Theory?

The nature of theory has been the subject of much discussion amongst philosophers of science during the last few decades from Ayer to Popper. Whilst it is impossible, here, to examine the competing positions in any detail, a number of general points are worth mentioning. First the simplistic empiricist position, as outlined in my 1983 paper in Medieval Ceramics will not do. The idea that the facts themselves - our observations/the instances of ceramic recovery - somehow speak for themselves and will lead to enlightening or even true generalisations, would not find general acceptance by philosophers of science. Observations are theory dependent, whether we like it or not. The theories involved can be very precisely stated or implied, but may also be more vague or generalised. "The hurricane last October blew over a large number of trees" implies a theory of force much less precise than, for example, Newtonian mechanics.

Secondly, experience suggests that the 'best' theories are those which make sense of most observations. Copernicus's astronomy was bold in that he clashed with the then, 1543, generally accepted theory that the earth is stationary and at the centre of the universe. His new theory that the planets revolved around the sun, explained the observed retrograde motions of Venus and Mercury, which had been a major problem to previous thinkers. Similarly, Newton's theory of gravitation and later Einstein's, explained more observations problematic to Copernicus. Einstein's theory of relativity

explained how light waves could be bent as they pass the sun, an idea not possible for Newton.

Thirdly, theories must be at least instinctively plausible. The more plausible a theory, which is not actually falsifiable, the better. For example, the statement that "the planets of the solar system move in ellipses around the sun" is more falsifiable than that which says "the earth moves in an ellipse around the sun" or that "the earth moves in space". A statement such as "the earth is full of joy and gladness" is not really falsifiable.

What seems to be happening is that a question of the form 'what if...' is asked. "What if the earth is moving in space and not the centre of the universe?" (Copernicus); "What if light consists of moving particles?". These questions can be tested as theories against the corpus of existing relevant observations and against new observations specially designed to falsify them. The turkey was using an inadequate theory which dealt with a narrow band of existence; his theory was easily and dramatically falsified.

Theory and Medieval Ceramics

The thesis of this paper is that medieval archaeology and ceramics studies are being carried out according to inadequate and usually unstated theories of the past, the nature of archaeological evidence and inference. This problem can be illustrated in a number of ways:-

What is actually published.

If all ten volumes of Medieval Ceramics are consulted it becomes clear that, even in the Group's own research publications, theoretical questions have played a minor role. Only *THREE* papers out of a total of seventy-eight deal directly with primary theoretical problems (Blake 1980; Davey 1983; Orton 1985). That by Blake, in particular, is a model of clarity - what if pottery assemblages reflect demand in an economy? - is the theoretical question. Blake illustrates how existing groups can be tested and understood in the light of this theoretical assumption. He also suggests how future collection and classification of finds should proceed in order to illuminate, or falsify, his assumption, even to the point of changing or influencing the sites chosen for excavation and the manner in which they are to be tested. That by Orton in 1985 examines innovation and diffusion as concepts and then considers case studies which may, or may not, affirm the theoretical assumptions. Although these two papers deal with quite narrow, and related, areas of theory, the contribution they make to the study of medieval pottery is a major one.

Other papers in Medieval Ceramics have, it must be admitted, dealt with what might be described as second level theoretical problems - Verhaeghe on the economic significance of 'traded' pottery distributions (1983), and Moorhouse on the relationship between documentary evidence for the geographical movement of medieval households and the archaeological ceramic finds, for example. Such discussions, though very useful and stimulating, do not address the primary theoretical problems or assumptions inherent in them. They are based on prior assumptions about archaeological or historical ceramic production and loss, which are not stated or examined. This would be perfectly proper, within the context of the subjects dealt with in these

articles, as long as somewhere, sometime, these same writers did state and argue for these underlying theoretical assumptions. It is interesting that the editors of Medieval Ceramics in the first Editorial (Davey and Hodges 1977) made the objective of the Bulletin 'accounts of particular industries', 'synthetic studies' and 'technological and methodological approaches of wider application'. The journal has remained faithful to these aims: but there is no mention of theoretical studies.

Beyond Medieval Ceramics the vast majority of all medieval ceramic papers consist of special reports as part of excavation reports. These assume that the pottery collected and studied is "in order to help the excavator understand the site". This was almost certainly the case. They are produced in a theoretical vacuum.

Another way of looking at the theory/practice relationship in medieval pottery publications is to observe how rarely modern approaches to science, history, anthropology, economics or sociology, whether at a theoretical or methodological level are ever invoked by pottery workers. Even the papers by Blake and Orton appear to have had little effect on thought or practice.

It may be helpful, here, to give a few examples of problems caused by inadequate theory and its attendant practices. I have chosen four 'cases' which should be familiar to most ceramicists.

(i) The Stafford Ware/Chester Ware debate

At the York conference of MPRG there were acrimonious discussions about whether Chester Ware should not now be called Stafford Ware as a result of the kiln finds from Stafford. Although the debate at the time did not appear conclusive, an undated West Midlands Medieval Pottery Research Group Newsletter subsequently spelt out the reasons why all such material should be called Stafford Ware. The reasons centre on the fact that the Stafford finds, unlike those from Chester, Hereford etc., are from a kiln and that a very much greater quantity of material evidence is involved. Whilst this argument ignores the scientific conventions of type naming and the specific recommendations already made for this in the ceramic field by Hurst and others, it is also inherently illogical. What, for example, if more and larger kiln groups turn up in Gloucester? The argument has proceeded from inadequate or confused theoretical assumptions about the nature and definition of wares as such. What constitutes a ware? How can they be defined or distinguished? How do they relate to individual potters, families, kiln groups, regions? In this particular case there is no difficulty in maintaining 'Chester-type Ware' as the generic name for a whole range of Saxo-Norman, West Midland/Welsh Marches wares and defining individual wares such as Stafford Ware based on either kiln groups, where they exist, or on associations of distinctive traits.

(ii) Using pottery as a dater

Pottery workers appear to be developing signs of dual personality when it comes to dating. Excavation reports frequently use pottery dating as the major absolute chronological tool, often the only one. It is not hard to find specialist reports in which pottery is dated to within a quarter century. At the same time prominent figures in pottery studies are increas-

ingly questioning the value or even possibility of dating material pottery in this way, as the combination of inherent problems seems so great. To these workers the dating of pottery should be relegated to a secondary side-issue - to quote the 'preliminary notice' for the Southampton conference ... 'the dating aspects of the material (should) be allowed to take a back seat'. The conference organiser only just persuaded the committee to include it as one of the study-group's subjects. This inconsistency and ambivalence is basically due to a lack of clarity about the nature of dating systems using type-fossils. The theoretical problems involved in the use of pottery as a dating tool are profound and complex. This is not, however, a reason for giving up this avenue of research, but rather, should be a stimulus for a more radical theoretical discussion.

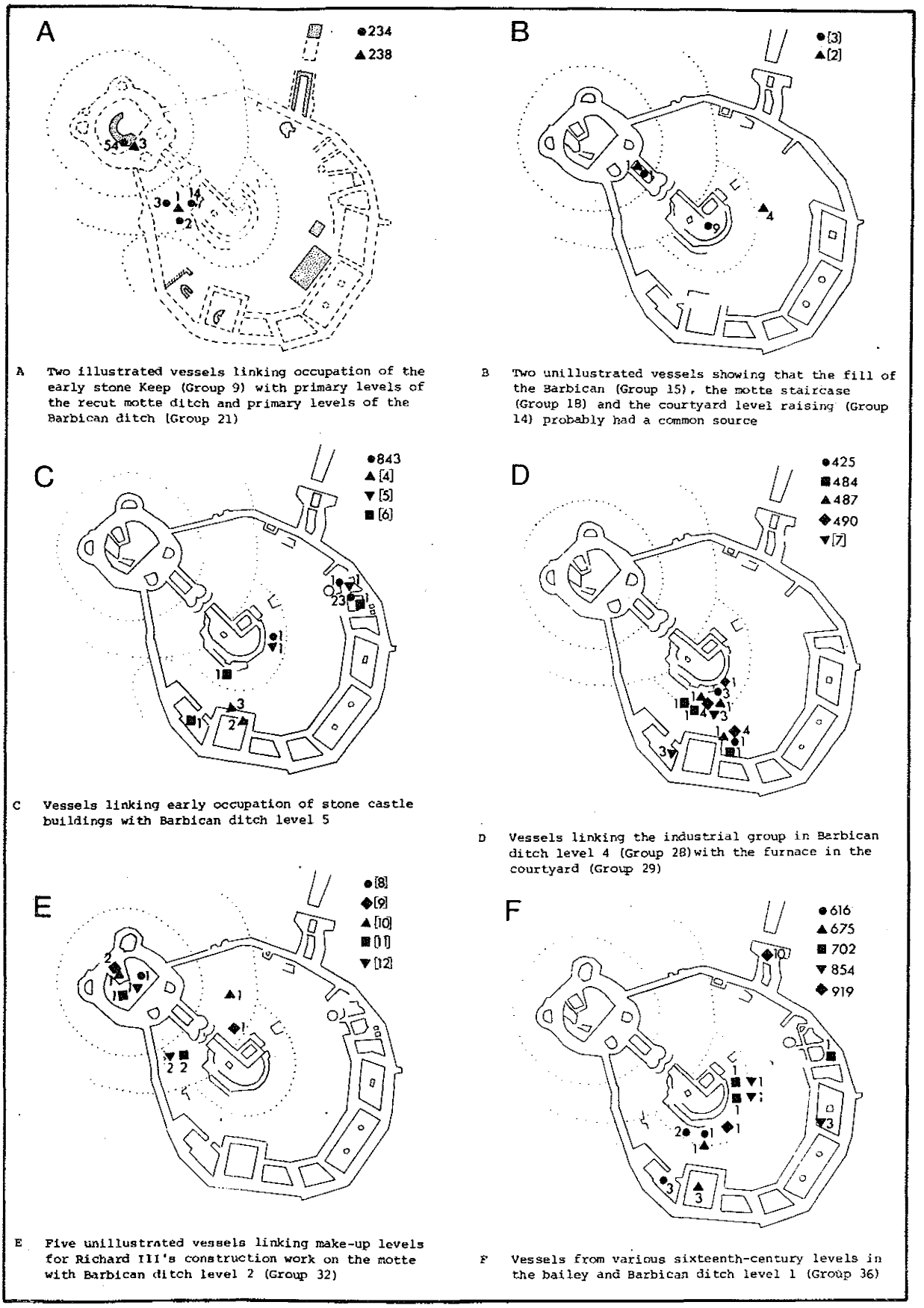
(iii) The Sandal Castle site pottery distribution analysis (Moorhouse 1986)

This much lauded report includes an often quoted and impressive geographical analysis of ceramic finds in the Barbican ditch which was only possible because the site was excavated in separate sectors (Fig. 1). Whilst the usefulness of the pottery and its locations as an interpretative tool is very well demonstrated by the actual distibutions recorded, such usefulness does not in some way validate the excavation techniques used. The theoretical question as to what would happen if the ditch was excavated in a range of competing techniques or following alternative sampling strategies is only partially addressed and certainly not decided by this example - as is sometimes implied. Whether or not random sampling or three dimensional recording of the pottery would have allowed 'better' demonstrations cannot now be decided. This example does suggest that alternative pottery recovery strategies should be tested against each other on a range of sites.

(iv) The uses of pottery suggested by documentary evidence and by finds of pottery.

One of the advertised themes of the Southampton conference was to assess the numerous and often unique contributions pottery can make to an understanding of the function of an excavated site. One such contribution is in the identification of pottery used for specific purposes. A lot has been made of the documentary evidence for a range of uses (Moorhouse 1978, 1986). This type of information may well be illuminating, but should be used with caution. Whilst the identification of pottery fermentation groups may be tempting in light of medieval descriptions of the processes involved, the same argument on the basis of the well known illustration from the Luttrell Psalter of pots being used in a fight could be used to establish sites of combat from the sherds of broken pottery recovered (Fig. 2)!

A third illustration of the problematic relationship between theory and practice in pottery studies is given by the organisation of the study groups at the Southampton conference. The synopses of the seminar subjects reveal that virtually no place is given to theoretical considerations. In fact with the possible, though doubtful exception of one section of the research strategy summary, it is clear that the prime assumption is that medieval pottery studies are a kind of service industry for the excavators of



A Two illustrated vessels linking occupation of the early stone Keep (Group 9) with primary levels of the recut motte ditch and primary levels of the Barbican ditch (Group 21)

B Two unillustrated vessels showing that the fill of the Barbican (Group 15), the motte staircase (Group 18) and the courtyard level raising (Group 14) probably had a common source

C Vessels linking early occupation of stone castle buildings with Barbican ditch level 5

D Vessels linking the industrial group in Barbican ditch level 4 (Group 28) with the furnace in the courtyard (Group 29)

E Five unillustrated vessels linking make-up levels for Richard III's construction work on the motte with Barbican ditch level 2 (Group 32)

F Vessels from various sixteenth-century levels in the bailey and Barbican ditch level 1 (Group 36)

Fig. 1. Was Sandal Castle well excavated?

Fig. 2. Do our finds of broken pottery suggest widespread hand-to-hand fighting?

medieval sites. Unless the subject is put onto a firm basis - in its own right - it is difficult to see how this activity can avoid becoming an increasingly expensive and disappointing ritual which financial stringency will further marginalize.

Theory and Practise in Medieval Ceramic Studies

The relationship between theory and practice can be usefully employed with reference to the eight group subjects, which are treated here in the order they appeared on the Conference programme. A number of theoretical issues will be suggested in each case (a-n), followed by some practical questions (i, ii etc). Clearly there may well be other, better theoretical issues, but these will serve as examples and to introduce the conference themes.

1 Research strategy

(a) What is the status of excavational evidence within a variety of historical and empirical value systems?

(b) What is the status of pottery recovery within these?

(c) Are there independent theoretical bases for the study of pottery in past societies?

(d) What is the logical status of questions asked of the pottery?

(i) How is the pottery collected?

(ii) How is it processed? How is it counted?

(iii) How is it studied?

(iv) How is it used?

All of these questions should be asked in relation to the theoretical issues already raised.

2 Site chronology

(a) What is the status and function of chronological statements in medieval archaeology?

(b) Can pottery be used to date contexts and sites in the context of (a) above?

(c) What is the relationship between relative and absolute chronology?

(d) What degree of precision is theoretically possible?

(e) What is the influence of excavation recording systems on pottery interpretation?

(i) Is the way in which pottery is collected and processed commensurate with these theoretical objectives?

(ii) What is the influence of the archaeological contexts themselves, processes of deposition and redeposition on the use of pottery for dating - the residuality problems etc.

3 Ceramics and site functions

(a) Why do we need to know the function of a site or parts of it?

(b) What functional distributions are theoretically possible?

(c) How does function fit into the overall objectives of medieval archaeology?

(d) What would be a 'perfect' or model situation? There is a good deal of anthropological work on this.

(i) How can conflicting interpretations of function/status be resolved?

(ii) What is the role of pottery finds in this process?

(iii) How far can function/status be determined for pottery?

(iv) Is collecting policy adequate to achieve these aims?

(v) What is the relationship between the function/status of an area and the pottery found within it?

(vi) Is the pottery collected and processed with a view to discovering site function and status? If not, how could this be changed?

4 Ceramics and their uses

(a) In what ways would the knowledge of the uses of pottery contribute towards our understanding of past societies?

(b) Is pottery use a significant element in such an understanding?

(c) If we knew how all pottery was used, how would this help us?

(d) How far, in pottery, is use related to form?

(i) How can competing claims be resolved?

(ii) How far and in what ways can documentary evidence be used?

(iii) Are collecting policies and post-excavation systems adequate to determine use?

5 Economics of distribution

(a) What type of distribution patterns would, in theory, be expected given different economic and marketing systems?

(b) How far do non socio-economic factors affect distribution?

(c) How does knowledge of spatial distribution of commodities help towards understanding past societies?

(d) Is pottery a significant commodity or rather in what circumstances would it be? Can significance levels be established?

(i) Can distributed pottery be correctly identified in sufficient quantity for reliable inferences to be drawn?

(ii) How can distribution patterns be stated and analysed?

(iii) How can competing claims of differing economic and marketing models be reconciled within the ceramic evidence?

(iv) Are sites selected for excavation and finds collected and processed with this group of aims in view?

There is a wealth of theoretical and methodological material available from anthropologists, economists, geographers and statisticians which ought to be considered here.

6 Ceramic Production

(a) Why do we need to identify production centres? If we knew the sites and plans and the products of all the pottery sites in medieval Britain - as we do, for example, of European postage stamp producers in the second half of the 19th century, what role would this information play in medieval archaeology?

(b) What constitutes a production unit?

(c) Are pottery production sites of special significance? Is pottery itself important as a product?

(d) What it the relationship between technological change in pottery production and other dynamic socio-economic factors?

(i) Do we approach 'production' from the production site end, or from the consumption site? (in demand as opposed to supply - Blake)

(ii) Which type of production sites should be excavated and by what means?

(iii) How should consumption sites be tackled?

(iv) Are sampling strategies adequate? Are alternatives available?

7 Defining medieval ceramic types

(a) Why do we need to define types?

(b) What are the theoretical possibilities for a type definition and its distinction from other types? What is the status of a type? Is it a useful theoretical construct which allows discussion to proceed or is it something of more fundamental significance?

(c) How can we tell when a type is correctly defined?

(d) When all the types have been defined; what then?

(i) Are excavation, recovery and processing methods adequate or influential in the definition of type?

(ii) How are types recorded, quantified, analysed?

(iii) How far are technological factors dominant in type definition?

8 Presentation

(a) How is the body of knowledge about medieval pottery perceived? Of what does it consist?

(b) How is the community of ceramic scholars perceived and how do they relate to workers in other disciplines?

(c) How can/should additions, qualifications and corrections be made?

(d) How does the publicatios of pottery fit into this framework?

(i) Do excavation recovery, handling and recording techniques affect the form of publication? Do they help or hinder?

(ii) Are excavations designed to increase knowledge about pottery?

(iii) How do we decide on significant levels of publication or archive?

(iv) What levels of information or interpretation are appropriate to what audience?

Discussion

Clearly all of the eight seminar subjects are inter-related on most levels. The sessions were designed to focus on specific aspects of the overall theme in order to make discussion in a short space of time possible at all.

A number of threads run through what has been suggested as theoretical and practical issues in these eight subject areas. There are two major ones:-

(i) the relationship between pottery questions and those of medieval archaeology and history; and

(ii) the relationship between theory and practice in pottery studies.

In the first some general questions in relation to medieval history and archaeology have been posed and then specific pottery forms of the question raised e.g. what is the role of absolute and relative chronology in history and archaeology and can pottery be used as a dating tool? etc etc.

The question can usefully be put in the form - if we actually knew all the basic facts of type x, what would we do then? If we knew where all the pottery kiln sites were and could identify their products; if we knew the use of every pot we excavated and its date. If we knew all these things what would we do then?

This is a fundamental question as we are dealing with sets of very partial data and many missing values. If we do not know what we would do, what questions we would ask or what hypotheses we would test, if we were presented with a full set of data, how can we hope to cope with the material we actually have to deal with?

The second common thread relates to how our practices of digging, post-excavation and publishing pottery relate to all the theoretical considerations which have been suggested. The common question is - are excavations designed with these methods in mind? Is the pottery collected in such a way and treated in such a way as to further evaluate these theoretical positions. The answer is invariably in the negative. That this is so suggests that all is not well in pottery research and in the relationship between excavators and pottery workers.

I would like to finish by drawing a comparison between medieval pottery specialists and botanists and zoologists working in environmental archaeology units. At first glance the similarities are striking and outweigh the differences in the nature of the evidence being studied. Both groups operate a service industry for medieval archaeology. Both receive, as given, material excavated by archaeologists and both tend to voice the same complaints about how and why it has come into being. Very rarely do either group of specialists have any say in the selection of sites to be excavated and often little input into the actual recovery techniques adopted by the excavators. Finds arrive in a variety of conditions, often mutilated by trowelling, picking and shovelling, or worse.

The other striking similarity is in the incompleteness of the data being studied and all the problems inherent in evidence derived from archaeological deposits. Whole plants or animal skeletons, like whole pots, are extremely rare. Residuality, redeposition, missing data and missing values are endemic.

The differences between the two groups of specialists are also interesting. Environmentalists are hardly ever asked to date individual fragments, or to manipulate their data to provide dating for contexts. They can just concentrate on trying to use the evidence they have, together with the site records and other environmental material, as a means of understanding the site environment and eco-systems and their relationship with past human activity on the site.

A more important difference is in the field of theory. Practising environmental archaeologists are a minute proportion of scholars who have studied and are studying the subject from Linnaeus and Darwin to modern geneticists and ecologists. Their work is based on a very large body of systematic knowledge of plants and mammals, which is itself founded on and developed out of extensive areas of theory - taxonomy, evolution, genetic typing, D.N.A. etc., etc. Medieval pottery studies lack this essential upper tier of theory and knowledge. It is as if the study of the morphology, anatomy, life cycles and social organisation of mammals was dependent almost entirely on what could be gleaned from excavated fragments alone. This highlights the problem caused by pottery being perceived as a means to an end in the understanding of the uses, status and chronology of archaeological sites. The study group subjects at Southampton have all been stage managed with this presupposition in view. Whilst the value of ceramic evidence to medieval archaeology is clear and its range and depth only now coming to be understood, unless the subject is established on a more sound theoretical basis it is difficult to see how fundamental progress can be made. Lord Rutherford, when asked to define science, said something on the lines of: "Science is theoretical physics; the rest is postage stamps." Whilst not wishing to adopt such an extreme definition of empirical activity it is worth considering whether medieval pottery study, practised as it is now with little overt theoretical structure, is not close to stamp collecting.

Remembering the fate of Bertrand Russell's turkey, may not our next tray of Penny Reds be our last.

* Read at Southampton April 1988

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