

there is some evidence for piles of three as the mug with the scar of another on its base is itself unglazed internally. That pots are placed on top of each other indicates that sappers were not used, as they are a means of solving the problem of stacking. There is evidence that square or oval discs (Brandhilfen) were used to separate the pots in the kiln at Raeren (Von Bock 1971 plate 388) but this does not affect the argument developed above. However, their use would explain why scars on the undersides of mug bases are so rare. One problem is how the salt manages to penetrate to the undersides of the base to glaze them, which happens in nearly every case (88%). It may be that the upper row is placed partly over two mugs in the lower row (or their Brandhilfen - Von Bock 1971 p.20) and the gap between them would allow the salt in, but this does not explain how the lower row were glazed.

The distribution of brown and greys is also peculiar. It would be expected, if the brown is caused by an applied iron wash, that some brown vessels would be grey internally and on the underside of the base (because they **did** not bother to cover those parts which were not visible) but that those glazed grey externally would be grey elsewhere too. This is indeed the case with the undersides of the bases, where the five which are glazed grey externally are also grey under the base. But internally there are nineteen which are brown (compared to 32 grey) even if the brown/greys are ignored. In fact the breakdown is similar to the mugs glazed brown externally where 33 are grey internally (compared to 34 brown). It is indeed strange that the inside should be covered in an iron wash where it could not be seen while the outside was left grey. It is interesting that almost exactly the same number were brown externally as grey and likewise internally (if the grey/browns are ignored). This may indicate that the iron wash was applied for some reason other than appearance. The recessing of the rims, which is so common,

may also have had a technical function since it would reduce to a minimum the area of contact with the brandhilfen or pot above.

The handles on the Raeren mugs are applied by being gripped at each end between the finger and thumb (which leave their marks on the handle) and pressed onto the side without, apparently, causing any distortion to it.

OTHER IMPORTS (What follows is partly based on notes supplied by John Hurst and Pamela Clarke).

The other most important group of pottery described under imports is the group of yellow glazed ware mainly jugs. These have been published as Beauvais products (Hurst 1971a) but recent work has made this seem less likely. Beauvais, in the fifteenth century, is largely a stoneware producing area (see particularly kiln at **Savignies**, Chapelot pers.comm.) and white wares of any kind are very rare (thus the 15th and 16th century layers from the excavations at Galerie Nationale de la Tapisserie contained little white ware none of which was yellow glazed, Chapelot pers.comm.). The early 16th century kiln at La Detrouite also produced mainly stoneware with some sgraffito and a little white ware glazed green or yellow and brown but not apparently yellow on its own (Cartier pers.comm.) and the typical jug is very different from the Guy's types. Likewise there are no yellow glazed jugs on display in the Museum at Beauvais and enquiries elicited no information about any being in the collection.

It therefore seems very unlikely that these jugs were made at Beauvais but at the moment no alternative source can be suggested for them. Yellow glazed white wares do occur at Cheam I but in a sandy fabric (Marshall 1924) and these are rare outside the kiln site. Likewise a few cooking pots occur with yellow glaze on rim and base internally (see two sherds probably from Cauldron Type Cooking Pot here and complete cauldron type cooking pot from London Bridge 1967 (Beeby pers.comm.)) but these again are sandy fabrics.

There appears to be no yellow glazed wares in the early kiln at Farnborough Hill, even though this was making similar wares with a green glaze. Nevertheless, Surrey must remain a strong contender to be the source of these pots, for there are undoubtedly many kilns which have not been found and East Surrey might be a little more likely than West Surrey. Their distribution at Guy's would suggest that they are only made for a short period for they are all in L10-5 except for one sherd in L3/4 which is probably residual. They would thus seem to have their floruit in the last two decades of the 15th century and perhaps the first two of the 16th.

Do these conclusions apply automatically to the other Beauvais type jugs from England? Not necessarily since their shapes are somewhat different. But the observations about Beauvais apply to these too and their shapes, likewise, are not like the common type at Beauvais. Hurst has already pointed out (1971a p.6) that the distribution of these yellow glazed jugs is different to that of Beauvais sgraffito. Their distribution is very concentrated in South East England (11 of 23 examples) but the others are very widely distributed (Scotland, Yorkshire, Ireland, Devon and Belgium), but the distribution of Surrey White Ware type fabrics is also very widespread. As to date, nearly all are vaguely dated early 16th century (8 sites) often with a suggestion that they pre-date 1539. The only closely dated example comes from Porchester Castle from a context of before 1521/27. Therefore generally the dating evidence is consistent with that from Guy's though not precise enough to show whether the early terminal date suggested by Guy's is justified. There is one jug from Southampton from an early 17th century pit but it is rather different in form being less squat and globular. By that period Surrey potters were certainly producing yellow glazed wares anyway (though not certainly jugs).

THE POST-MEDIAEVAL CERAMIC REVOLUTION

In the second half of the fifteenth century, it is now generally recognised, a radical change occurred in the ceramic industry in England, so radical indeed that the term revolution is often applied to it. There can be little argument that it was a period of very far reaching and rapid change which was not, of course, confined to pottery. The question is do all the changes occur at exactly the same time or is it that a series of changes occurred which are so close together that they have been conflated into one event.

In London the 'revolution' can be seen by comparing groups such as Kennington Palace Group 3 F77 (Dawson 1973 p.134-6) which seems to accumulate within the period c1360/70-c1475 (ibid p.112) and contains almost exclusively sandy Surrey Wares with cooking pots (i.e. the mediaeval type of globular vessel without handles or feet) and jugs being the only vessel forms present and Trench 1 L10-3/4 here, if one excludes the sandy Surrey Wares as residual. The changes can be grouped into two categories, fabric and vessel types. Of the former, the most obvious changes are the, at least relative, decline of Surrey Wares which have altered to become the largely untempered Surrey White Wares and the replacement of them as the commonest type by red wares. The second most obvious change, fabric wise, is the advent of imports on a large scale, particularly Raeren stonewares and Cistercian Ware. Of the vessel types, the cooking pot has gone, to be replaced by the cauldron type cooking pot, jugs have declined in importance, smaller individual drinking vessels (both Surrey White Ware and Cistercian Ware cups and Raeren mugs) and larger pitchers having largely replaced them and a whole new range of vessel types have been introduced (frying pans, dripping pans, watering cans, chafing dishes, condiment dishes, costrels, moneyboxes, bottles, jars and dishes of various sorts) while bowls which do occur occasionally in Surrey Ware groups in the later Middle Ages have now become fairly

common. Some of these changes are linked together; for example Surrey Wares have moved up-market to use a modern term and are producing the more expensive types for the table and not the cooking pots and pitchers for the kitchen.

There is certainly an horizon in this period marked by the appearance of Raeren stoneware, Cistercian ware, and South Netherlands Maiolica which seem to occur in all groups of this period which are of any size. This horizon occurs in Trench 1 at L10 where all three of these occur for the first time. The problem is in defining what went immediately before especially since the sandy Surrey Wares in Trench 1 and 2 have been shown to be probably cumulative. But already in L12 there are certain occurrences of red ware pitchers and wall sided dishes and possibly of unglazed cauldron type cooking pots. The L6-4 group in Trench 2 which is thought to be contemporary with L12, also has pitchers, flanged bowls and probably unglazed and brown glazed cauldron type cooking pots. Thus it does seem likely that red ware pitchers and cauldron type cooking pots (unglazed and occasionally brown glazed), wall sided dishes and flanged bowls begin before that horizon. There is some evidence too that cooking pots may go out of use in some contexts while Surrey Wares are still dominant (i.e. in the mid 15th century) evidenced by Group IVb at 199 Borough High Street (Turner 1971) where cooking pots do not occur (though a variant of cauldron type cooking pots does occur in this particular group) though there is some evidence that the flanged bowls were used for cooking since a number have areas of smoke blackening on them. A similar disuse of cooking pots has been noted in the East Midlands at this period too (Moorhouse 1974). However, cooking pots were being made at Cheam I and Farnborough Hill kilns (though at the latter site often with strap handles) which belong to this period too and later still at Hareplein in Kent so there may be regional differences. Surrey White Wares also occur, on occasions,

in these groups (L12 here, Farnborough Hill) but is often absent (in T.2 L6-3 group only one example possibly contaminant, none in 199 Borough High Street group 1Vb).

Occurring for the first time in L10 are also Green Glazed Cauldron Type Cooking Pots, possibly red ware pipkins, everted rim bowls and a lid. Though 'Unglazed' Cauldron Type Cooking Pot's are commoner in L10, the green glazed variety becomes commoner after it. The important innovation in L9 is the appearance of Guy's Ware in which a chafing dish, wall sided dish and probably jugs and pipkins occur and which certainly do in the next layer (6) along with flanged bowls. In the red wares, there appear jugs (with frilled bases), vertical rim bowls (only to disappear again), flanged bowls and flanged dishes. Changes continue in the rest of the sequence but layers 8 and 5 have too few sherds in them to be good evidence and L6 and L7 seem very similar. Everted rim bowls die out after L6 (in which only one example occurs), while flanged bowls increase slowly in L6 and 7 but dramatically in L3/4 (where 14 occur compared with 3, 3 and 1 in Layers 7, 6 and 9 respectively). Flanged dishes remain fairly constant. Though always rare, pipkins become commoner after L9 particularly in L3/4 (counting only handles, their distribution is 1, 1, 1 and 8, in L9, 6, 7 and 3/4 respectively). L6 also sees the first dripping pans both flanged and unflanged and also watering cans and Type 4 cups in Cistercian Ware. These latter items are so rare, however, that their absence from earlier layers may not be significant and the same applies to the frying pan which first appears in L3/4 but the flanged chafing dishes and sgraffito decoration which occurs there too, may be more significant (see above p.194-7 for other differences in L3/4).

There is some evidence that many of these innovations did not

last very long though this is difficult to prove because of the dearth of late 16th and early 17th century groups. The increase in the popularity of pipkins vis a vis cauldron type cooking pots certainly continues and the pipkin becomes the standard 17th century cooking pot. At some point the cauldron type cooking pot disappears but when precisely this happens is not known. At Southampton twelve cauldron type cooking pots were published with a 16th century date (Platt et al. 1975) and only two with a 17th century date (Ibid. Nos. 756 and 759) both from the same pit whose upper fill (from whence they presumably came) is dated rather earlier elsewhere (Ibid. p. 206 - late 16th - early 17th century). This would certainly suggest (if the selection of published material is representative) that cauldron type cooking pots were rare, if not unknown, in 17th century Southampton and the same may apply to London though it has been suggested that they survive till the late 17th century (Merrifield pers. comm.). It seems more likely, however, that in the 17th century their place was taken by Domestic Vessels which may be a development from them (losing the feet and one handle) and by the pipkin both of which are common types. Dripping pans are also far commoner in the 16th century than later. For example at Southampton there are 8 or 9 published from the 16th century (Platt et al. 1975 passim) but only one 17th century example and that of a rather different form, while from Sewardstone Street, Waltham Abbey (Huggins 1969 passim) two or possibly three are published, all of which are 16th century or earlier (but for 17th century dripping pans in Essex (unflanged) see Newton 1958 and Blake et al. 1961). The same may also apply to frying pans. This is not to say that these vessel types never occur except in the 16th century but they are certainly far commoner then than at any other time.

Other changes have certainly taken place by the later 16th century. The Surrey Ware potters seem to have extended their range back to the kitchen and are making cooking utensils again in the

shape of pipkins. The 'Tudor Green' types have also declined or disappeared and the common cup form is now the horizontal loop handled cup (Holling 1971 passim). It seems likely that Cistercian Wares are no longer imported in the second half of the 16th century (Addyman and Marjoram 1972 p.81) and Raeren likewise in the later 16th century.

Thus the 'revolution' can be seen quite clearly to occur in stages, even if one ignores the evidence of the less common types, but instead of merely being an episode changing the mediaeval pottery industry into the post-mediaeval pottery industry, what is really happening is an acceleration in the rate of change from the comparatively slowly changing mediaeval industry to the more rapidly changing post-mediaeval one. In this the pottery industry is a mirror to its age. However, this acceleration does start off with a period of very rapid change during the period c1480-1530 or even perhaps c1480-1500, again symptomatic of the period. However, the recovery of large closely dated groups of the mid 15th century may show that some of these changes do start earlier, particularly the introduction of the red wares (see above p.44 for this suggestion).

FOREIGN INFLUENCE ON THE POST-MEDIAEVAL CERAMIC REVOLUTION

The question of how much the changes which have been discussed above were due to the influence of foreign potters has been much discussed by archaeologists in recent years though little has appeared in print about it. Basically, claims have been made that the changes occur because of strong influence from the pottery industries of the Netherlands and Northern France, so strong in some people's eyes as to imply actual movement of potters.

As has been stated above, in the Middle Ages the pottery industry in England was largely concerned with producing jugs and cooking pots. In this it was the western end of a continuum which stretched across the North Sea to the Netherlands and Rhineland. The cooking pot types of Northern France seem to be largely unknown though a few are known

from Rouen. (Barton 1965) and Picardy (Barton 1974) which could be regarded as belonging to this class of globular cooking pots. However, whereas in England globular cooking pots lasted, at least in some parts, to beyond the end of the Middle Ages, in the Netherlands and Rhineland kogelpots and kogeltoppen do not. At Aardenburg they disappear in the middle of the 14th century (Trimpe-Burger 1964 B22) and are replaced by cauldron type cooking pots (grape - ibid.D9) and the changeover seems to occur at the same time in the Upper Meuse Valley (Andenne in Period IIIb - Borremans and Warginaidre 1966). In the stoneware areas, however, cauldron type cooking pots appear earlier, c1200 at Siegburg (Beckmann 1974 types 18-20) and in the 12th century in south Limburg (Bruijn 1964 Period 1). They do occur in Picardy (Barton 1974 No.28) but not apparently further south.

Other elements discussed in the last section can also be detected in the late middle ages in the Netherlands. Dripping pans (braaslede) occur commonly in 14th century contexts at Aardenburg (Trimpe-Burger 1964 C4) and frying pans (braadpan) in the late 13th century as well (Ibid B29). In this the English pottery seems to be conservative especially since grape were apparently being imported as early as the early 14th century (Moorhouse 1972a No.23). However, many of the forms concerned in the Post-Mediaeval Revolution were made occasionally in England in the Middle Ages. For example at Laverstock (Musty et al. 1969), which appears to be 13th century in date, flanged bowls (including some with vertical loop handles on the rim like No.107 here), possible dripping pans (No.59), cauldron type cooking pots (No.48), pipkins (No.46), frying pans (No.49) and money boxes all occur, though they would appear to be fairly uncommon.

Thus there can be little doubt that these forms were known to English potters in the late Middle Ages but they chose not to make them, at least on a large scale, till the last two decades of the 15th century. This does not apply, however, to pitchers and flanged bowls whose large scale production starts earlier and for which

especially in the case of the pitchers, there is no reason to invoke foreign influence. Why then were these innovations accepted in the last decades of the 15th century? Two possible causes could be suggested. Firstly at large scale immigration of potters and secondly a large scale penetration of the market by imports forcing the English potters to copy the imported types to survive. The former can be ruled out fairly certainly. There is no documentary evidence for large scale immigration in the 1480s when indeed the Low Countries were enjoying the peak of their prosperity (emigration and prosperity can, however, go together, as in 19th century Britain). However, it can also be excluded on intrinsic grounds for the new pottery types, though similar to those in the Netherlands, are yet also English. For example, Dutch Grape have round bottoms but all the cauldron type cooking pots from Guy's (with perhaps one exception) have the typically English sagging base.

The latter is more difficult to prove or disprove. Theoretically it should produce two sorts of evidence. Firstly, it should be possible to detect this strata of massive imports which were then copied and secondly it should be possible to show the copying taking place. However, a later parallel would suggest caution. In the early 17th century imports of Chinese porcelain are generally agreed to have produced the changeover amongst maiolica potters to delftware. But Chinese porcelain does not rank large in the archaeological record in the early 17th century. For example, in the large amount of material from Basing House there are only small sherds from two porcelain vessels and thirteen years excavations in Southampton apparently produced no porcelain earlier than the 18th century (Platt et al 1975 passim). The second point is that maiolica type decoration continued to be produced for sixty years side by side with the new delftwares. However, it should be remembered that this change involved no technical innovation by the potter nor did it require any change in

domestic arrangements, merely a change in aesthetic fashion.

In the late 15th century there is one certain import which occurs in the archaeological record, namely Raeren stoneware mugs. So ubiquitous are these that their absence has been used as an indication of date (Moorhouse 1972a p.24). What are copies of them do occur in red wares (in Trench 1 two examples and three at Biddenden) in Cistercian Ware (Mayes et al 1966) and in Surrey White Ware (base fragment from Trench 1 - this however is more likely to be copying Siegburg). But nowhere are they common and they have no lasting effect on the English pottery industry. This would seem to make it less likely that the comparatively few imports of Dutch red wares should have had such a dramatic effect. Likewise the common occurrence of South Netherlands Maiolica, if usually in small quantities, does not produce any noticeable effect on the native pottery industry till the 17th century, the documentary evidence for late 16th century production not yet being matched archaeologically.

It could therefore be that these changes should be regarded as similar responses to similar stimuli but that these stimuli came rather later in England than in North West Europe. It is perhaps too often forgotten that pottery is, on the whole, not produced at the whim of the potter but in response to the needs of society and as these needs change, so will the pottery. Ascertaining what the changes are which might lie behind the discernible changes in the pottery is more difficult (see below p.268~~4~~)

Some of the features of the cauldron type cooking pots, besides the general form, suggests direct copying from metal prototypes. The smooth globular profile of over 80% of them reflects the similar profile of the cauldrons (the carinated ones may be a development since they are common in the later group from Salamanca Place (Ashdown pers.comm.)), while the strengthening ribs of the latter are reproduced in pottery by ridges or by bands of grooves. However,

the pressed feet which occur on a few sherds amongst the cooking pots (they have been grouped with the pipkins since three pipkins have them and only one possible pipkin has solid feet - however, their distribution, which concentrates in the lower layers, contrasts with that of the pipkin handles which are mainly in L3/4 suggesting that some cauldron type cooking pots also have pressed feet, unless they derive from bowls or dishes) are not copying metal prototypes since this is very much a pottery technique. The copying may therefore be mediated through the Dutch Grape. This connection is shown by, for example, the bands of grooves which occur on the shoulders of many grape and the fact that the handles are always rounded, never angular as on nearly all the bronze cauldrons and some mediaeval Dutch grape (this is somewhat variable, though, for the earliest examples at Schinveld are rounded and only become angular in Period V (c1350-75)). On the other hand, the very glossy, dark glaze which appears to have been deliberately produced on the Green Glazed Cauldron Type Cooking Pots could be an attempt to mimic the appearance of metal prototypes which it does quite well (that is of metal ones in use, not when pristine). This glossy external appearance does occur on some Dutch Grape (photograph of series from Middleburg cespit of c1500 (Trimpe Burger 1966 Plate 9) gives this impression and some at Schinveld (Period V Bruijn 1964) are also glossy so this trait may be copied from Grape rather than direct from the bronze cauldrons. But these Grape which are glazed externally are apparently rare in the Netherlands and most are unglazed (Dr. Sarfatij pers.comm.). It should be noted in this context, that bronze cauldrons in England have round bases like Dutch Grape (and continental bronze cauldrons) but unlike cauldron type cooking pots.

Even if cauldron type cooking pots were direct copies of bronze cauldrons, it would not explain the other features in common with the Netherlands. There is, however, some evidence that the main

period of Dutch imports of this type of vessel occurs after, not before, these changes have taken place. This might be weakly evidenced in F5 where no certain Dutch imports of this type

occur. . . However, it can be more clearly seen in the group from Building VIII at Toppings Wharf (Sheldon, 1974) which is dominated by Dutch cauldron type and other cooking pots (as demonstrated by their round bases) and this must be contemporary with or later than L3/4 since it has Beauvais sgraffito, Cologne stoneware and sgraffito decorated Guy's ware. Kennington produced two possible round based Dutch cooking pots in contexts of 1531/2 (Dawson 1973 fig.15 No.36 and Fig.16 No.63. Could be residual, of course, as much in Group 3 at Kennington is, though both are associated with Raeren stoneware). Likewise in the Whitehall 1532 pit group, there are elements which are probably Dutch imports, a round based cauldron type cooking pot and a number of dishes with sgraffito decoration internally on the base of which only one possible example occurs at Guy's. It could be argued that the use of sgraffito was a borrowing from the Dutch since it occurs at the same time (thus it occurs in all these three groups) but Beauvais sgraffito also appears at the same time, so the influence could equally be from there. Or is it not more reasonable to think of all three as part of a continuum where similar stimuli produce similar, but never identical, results? Copying ought, perhaps, to produce closer identities. If this 'invasion' of Dutch imports does take place in the decades around 1530, the earlier changes which have been discussed above would predispose the market to accept them where before, in the later middle ages, there might have been consumer resistance to them.

The evidence for French influence is even slighter and comprises mainly the lobed cup, which is said to have a long ancestry in the

South West. But these had been imported to England for half a century or more and had already been copied in local fabrics (at Cowick in a red ware, here (T2) and at Kennington (Dawson 1973 fig. 14 No. 28) in sandy Surrey Wares) and was already available to English potters. The pedestal cup is a variant of the lobed cup but the generic type (but without handles) occurs widely in stoneware in the late Middle Ages (Siegburg, Beckmann 1974 fig. 19 No. 164, Limburg Bruijn 1964 fig. 106 top right and Beauvais, Chapelot pers. comm). No other forms have been claimed as French though the changeover to untempered fabrics has been seen as another sign of French influence since Beauvais fabrics are untempered as are the finer Saintonge. But this is such a common technical improvement that stronger evidence than this would be needed for a French connection and there are other untempered fabrics in England at this period (e.g. Cistercian Ware). The connections, therefore, between France and the changes in Surrey Ware are slight and the influence of Beauvais seems to be non-existent.

Thus foreign influence is unproven; even if the case seems fairly strong with regard to the Dutch, it is hard to discern how this influence operated but certainly not through a migration of potters.

ORIGINS OF MATERIAL - KITCHEN OF LARGE ESTABLISHMENT

This section is not meant to be another discussion of kiln sources, but rather to investigate whence the material came to be where it was found and how it came to be there. This is necessarily very speculative but it is an important point which is often overlooked and can influence the interpretation of the significance of the group.

Here the late 15th-early 16th century material in Trench 1 clearly comes from a domestic context. Both basic elements of domestic arrangements are represented; the food preparation part by the cooking pots, frying pan, drip pan and probably the pitchers and some bowls and dishes; the food consumption part by the fine

Surrey jugs, the cups and the chafing dishes. Only the possible distilling apparatus would argue against complete domesticity but the status of these is ambiguous. There is a strong connection between them and monastic houses with implications of use in alchemy. Seven of the sites mentioned by Moorhouse (1972b) are monastic or collegiate, six are kiln sites and of the nine others, seven are from London, on three of which they are the bulk of the material, suggesting perhaps some industrial activity. But the odd finds from some sites may indicate the distilling was carried out in a domestic context too (cf Platt et al. 1975 No. 749 from Cuckoo Lane, which would appear to be a cucurbit base, comes from a site which appears to be domestic - not included in Moorhouse 1972b) and this is most likely to be the case here (but see below p. 259).

The most obvious source for this material is the stone structure against whose eastern wall it was piled, implying that this was a house. There are, however, two objections to this. Firstly it seems rather strange that the 'householder' should have tolerated the accumulation of so much rubbish, and it included very large quantities of food waste as well as pottery, immediately outside his building when there was presumably ample space for it to be dumped a little further away. Secondly the patterned floor tiles present a problem. The two decorated tiles are both of sub-Perntype for which a date in the second half of the 14th or early 15th century has been suggested (Turner 1967 p. 48 and Dawson 1973 p. 89). The wear on both suggests long use, probably in terms of fifty or a hundred years and this would clearly fit with their appearance in a dump of the late 15th-early 16th century. However, the construction of the stone building has been dated above to c1480 and it is difficult, therefore, to see how these tiles could derive from that building. More likely to come from this building, or perhaps its wooden predecessor, are the yellow glazed white slipped tiles because they are the commonest type (13 fragments out of 20).

because they show little sign of wear (except perhaps the example with the glaze missing though this may be a fault in manufacture) and because there is evidence for their manufacture at this period in the Cheam 11 kiln (Morris, pers. comm.) The green glazed ones too show no sign of wear and may be contemporary, but the others may be discoloured by wear. A later date for plain glazed floor tiles would be suggested by Kennington (Dawson 1973 p. 173-4) where there were only two compared with six patterned tiles which could be attributed to the 1350's building operations there, compared with the 18 plain and only two patterned here. It is therefore significant that the plain glazed tiles are distinctly thicker than the patterned ones, which fall within the thickness range of the Kennington examples, (both plain and patterned). Another tile which could derive from the F6 building is the tinglaze tile for, if that is South Netherlands maiolica it must date from after c1475 and parallels at Herckenrode (c1530) Whitehall (c1532), and the Vyne (1518-27) suggest probably before 1530. The concentration of plain tiles in L10 (6 out of 16, and some or all of the others may be derivative from L10) may imply that they were thrown away during the laying operation since L10 immediately succeeds L11 which has been attributed to the building operation themselves. The two patterned ones, and perhaps one or two of the plain glazed ones, must be residual and should be associated with the Sandy Surrey Wares which it has been suggested above accumulated in the 14th and 15th century and presumably derive from a floor of the late 14th century destroyed in the late 15th century flood.

This leaves the problem of the unhygienic/unpleasant dump near living quarters. The problem here is that there^{is} only a fragment of one wall and it is not known how this relates to the whole. It may be that it is a courtyard wall or the wall of a service room in

which case such conditions would be more tolerable. It seems therefore most likely that the material which can be dated to c1480-1530 in Trench 1 does derive from the building or complex of buildings of which F6 is one wall. What information this material throws on the building will be considered in the next section.

Although there seems rather a large quantity of domestic rubbish in Trench 1, there is no evidence that special circumstances operated in its formation. Although some pots are fairly complete, these are not unduly common and there are large quantities of single sherds which do not join or obviously belong to complete vessels. There is therefore no suggestion of a clearing out of a household of its stock of domestic pottery and the large quantities of bones and shells rules this out too since these are far, far larger than any household would have had at any one point in time. Quantities do, however, remain a problem but this seems a feature of this period in London since, although groups of the early to mid 15th century and of the middle to late 16th century are rare, this fairly short period between has produced a number of large groups in London besides this one (Whitehall 1532 pit, Gateway House Pit, Baynards Castle robbing of dock well, Toppings Wharf Building VIII fill, Foyle Road group etc.). This could be explained by a sudden decrease in the (relative) price of pottery making it available in larger quantities but here, at least, the large quantities of food refuse would not support this but might imply a sudden increase in wealth. However, there may be a similar state of affairs two hundred years later, in the last decades of the 17th century, at least in Southwark (199 Borough High Street and Lant Street both produced large groups from this period) and it may be that what is involved is a temporary breakdown in the normal method of rubbish disposal, whatever that might have been. Certainly the situation does not occur in Southwark where back gardens or yards are taken up completely with rubbish pits as happens in Oxford

(Hassall 1971 fig.3) or Southampton (Platt et al.1975 passim), which presupposes some other form of rubbish disposal was the norm from which pit digging or disposal near to occupied premises was a deviation.

The preponderance of kitchen type vessels amongst the pottery might suggest that the material was derived from the kitchen of the establishment. Thus most of the pottery is either cooking pots or pitchers, both of which might be expected in the kitchen rather than the 'dining room'. However, although the amount of fine table ware is small, there seems enough of it to suggest that the rubbish comes from both ends of the house, especially as some of the imports must have been expensive (at least compared with other pottery - see below). The food debris supports this because the bones provide no evidence that they are derived from the preparation as opposed to the consumption of food. Likewise the equality between the upper and lower oyster shells again implies the consumption as well as the preparation of food (Dawson 1973 p.105). The differing proportions of fine and 'coarse' wares may therefore relate to the servant-master ratio in the establishment which suggests one of some pretension.

The material in L14-12 in T1 and L9-4 in T2 must have been deposited by water action if the argument for the origins of these layers deployed above is accepted. Evidence has also been adduced that the Surrey Wares in these layers are cumulative, and the same can be demonstrated for the Roman material. For example, the material from L9-7 in T2 ranges in date from late 1st century (horizontally flanged bowl like Gillam 291 or 303) and early 2nd century (D18/31) to fourth century types (rouletted beakers like Gillam 56) or even later (everted rolled over rims paralleled at Appian Road (Sheldon 1972 fig.11 Nos.15, 20, 21, etc.) in a late 4th or early 5th century context). This is only to be expected if the material has been eroded by the river from the settlement area. The odd point is that the material from trench 2 is on the whole late Roman (apart from

about 4 sherds all could be after 200) and has material which could go right to the end of the Roman period (the everted rolled over rims, the flanged bowls, some of the colour coated sherds) while that from Trench 1 is mainly early Roman (i.e. 1st and 2nd centuries). It is also strange that the mediaeval pottery is largely confined to the upper layers (in Trench 2) and contains no pottery earlier than c1300. In this it models to a certain extent, the periodization which Kenyon suggested on the basis of her excavations (Kenyon 1953 p.14) though we now know that this is not representative of the settlement as a whole.

This raises rather difficult problems. It would seem to imply that in the first flood the water eroded principally layers containing late Roman pottery to which was added a few sherds probably of the 15th century and deposited them in T2 while elsewhere it eroded mainly layers containing early Roman pottery with again one or two fifteenth century sherds. The second flood, however, in both cases (this is clear cut in T2 but probably applies to T1 too where the picture has been confused by later disturbances) eroded layers containing almost entirely late mediaeval pottery (the other finds are consonant with this too). This selectivity is rather hard to believe in. The different dates of the Roman material could be ascribed to chance in the small samples (for though the number of sherds is quite large, most are unidentifiable). The only possible explanation of the difference between the two floods is that the water came from different directions. The earlier material must be derived ultimately from the west or south west which is the only area known to have been occupied in Roman times. The later material could have come from the north or north east where, along Tooley Street, late mediaeval settlement is known from documentary evidence but where Roman occupation is unlikely to have preceded it. This does explain the facts but the material derived from the west should have incorporated mediaeval material too and the Roman material has

clearly been water abraded prior to the flood since it shows much greater signs of abrasion than the medieval material. The water must therefore have eroded a layer which had itself been deposited by an earlier but post-Roman flood, or perhaps by more prolonged river action. This must have been deposited in an area not settled in the Post-Roman period and is therefore likely to be to the east or south-east.

CULTURAL SIGNIFICANCE

This section will consider what the material, mainly that in Trench 1, tells us about the establishment which produced it, which, as we have seen, is likely to be the structure of which F6 is one wall, and about what went on in this establishment. As has been shown, this establishment appears to be domestic. F6 demonstrates that it was built of stone and later of brick and the tiles which occur throughout Trench 1, that it was roofed with thin red roofing tiles with pegholes, the normal type in South East England. The floor tiles show two different floors are involved, one of plain yellow and green glazed tiles and the other of decorated maiolica tiles, and the nails may imply wooden floors too (see above p.192-3). These imply some differentiation between rooms in the structure, the plain tiles perhaps being used in service room(s) (kitchen, buttery etc.) and the decorated ones in the living quarters. This suggests an establishment of some pretension which the presence of maiolica hexagonal tiles indicates intrinsically since these are otherwise known only from an abbey in the Netherlands (Herckenrode), royal palaces (Whitehall and Greenwich (Dixon pers.comm.)) and a great house (The Vyne, Reckham 1926) all indicative of great wealth. Other imports may also be indicative of wealth. For instance there are five or six vessels in South Netherlands maiolica whereas from the thirteen years excavations at Southampton (Platt et al 1975 Nos.1156-8 and 1173-5) only six vessels of South Netherlands maiolica are published (plus No.1216 of a little later date - though there are some

which are not published (Ibid. p.129, 185 and 311) this hardly changes the picture radically). Since maiolica is a fine ware and an import, one must assume that it was expensive, relative to other pottery (though not, of course, necessarily absolutely) though single vessels do occur on sites of low social status (see Crossley and Ashurst 1968 p.38). Likewise Calatayud otherwise occurs at Whitehall Palace and Pleshy Castle which again implies high social status even though it is known as 'poor man's lustre'.

It is possible, therefore, that the establishment in question belonged to a member of the nobility. It would not be the only example of the nobility building houses in Southwark at this period for the Brandons (later Dukes of Suffolk) built a house in Borough High Street in the last decades of the 15th century. However, if this were so, it seems likely that the name of the owner would be known. The wide range of imports might suggest widespread connections in Atlantic Europe which may be indicative of trade. A more direct piece of evidence for the establishment being that of a merchant is the lead bale or cloth seal. These were used to tie round the necks of sacks, usually said to be of cloth, and impressed with the royal coat of arms and insignia by the Customs (the evidence for all except the cloth is intrinsic to the seals). It therefore seems more reasonable that the establishment is that of a merchant, perhaps involved in the wool trade. The figural jug could be taken as symbolic of this social class. The costume displayed by it is fairly grand but is not that of a noblewoman since it lacks jewelry round the neck and purses at the waist. This is not to suggest that it was meant to represent a particular individual, though, since this jug is almost unique, it must be a bespoke pot and it is therefore possibly modelled on a person.

However, documentary evidence shows that in the late 16th century St Thomas' Hospital owned the whole of St Thomas' Parish in which both trenches are situated and there can be little doubt that this ownership stemmed from the original foundation of the separate hospital in 1215. Although in the 16th century the area was leased out in small plots, there is no evidence for this happening before c1536 except for one plot near Borough High Street (this may, however, be due to gaps in the records) and it can be shown (Dawson 'Estates of St Thomas' Hospital in Southwark' unpublished) that a little to the west of Trench 1 (approximately below the courtyard and west wing of Guy's Hospital) lay the communal domestic apartments of the Master and Brethren of the Hospital from at least 1388. It is possible that these buildings stretched far enough east to include F6 in T1 and if so the material in T1 would have come from them. The communal buildings would no longer be necessary after the dissolution of the Hospital as a monastic establishment in 1540 but documentary evidence shows that rooms within the complex were being leased out from at least 1537 (G.L.C. Record Office H1/SE/E /S1/3) and it may be that in its last years (after 1528?) its communal life ceased to exist (Parsons 1932 p.115-7). This would fit well with the terminal date for F5 in T1 (assuming that the dump has not been significantly truncated). The quantity of glass in the L3/4 group may suggest a building in decline. The association of distilling apparatus with monastic or collegiate establishments has already been noted (above p.154). The ditches which occur in both trenches are clearly not boundary ditches (since they do not tally with the boundaries of the plots which can be plotted in the 17th century) unless they demarcate fields into which the area was perhaps divided in the middle ages.

It should be stressed, however, that all the imported pottery, except for the Raeren stoneware mugs, is quantitatively insignificant

and it could be that their number is merely a function of the large size of the group (the absence of quantitative data from other sites makes this difficult to judge). Certainly the ratio of local to imports is lower than at Southampton (Platt et al. 1975 Vol 2 p.30) but this is probably a general difference between the two cities, for in London locally produced pottery has always dominated the market. Thus while enjoying the use of imports (nearly all fine wares used at table or in the living quarters), the basic domestic economy is dependent almost totally on local products.

It could be argued that the presence of large quantities of pottery and the scarcity of metal objects apart from nails implies not wealth but rather a lack of it. Pottery is certainly a cheap material and the scarcity of it in sites of high social status in the Middle Ages has been attributed to the use of metal vessels (Dawson 1973 p.277) but Guy's does not seem very different from the Whitehall 1532 pit group and this consideration, even if true for the Middle Ages, may not be operative after it. Nevertheless the quantity of metal objects other than nails is very small. Two factors which might contribute to this is the greater durability of metal vessels when in use and the greater durability of pottery afterwards. The answer lies really in relativities but comparison with other sites is usually impossible because of a lack of quantitative data and must remain a subjective evaluation since it is difficult to create a suitable numerical index for comparing quantities of pottery and metal work. However, compared with Kennington Palace (Dawson 1973) there would seem to be many fewer metal objects in relation to the quantity of pottery and particularly a complete lack of any objects of dress (particularly buckles - the one which occurs is in a later pit). This may, however be connected with the origin of the material. For, if they are indeed derived largely from the kitchen, they would compare with the kitchen group from Kennington (material from Structure C) which was the largest group of pottery

on the site but contained no metalwork. However, evidence that it belongs to a grade of wealth below Kennington is provided by the complete absence of lead which might come from roofs or window leading (of Dawson 1973 p. 144-6 and Rahtz 1969 p.85) which, if it had been present in the building would have occurred with the building material and, as metal, would have been collected. It is also distinguished from Kennington and Writtle by the absence of any jettons. These are usually regarded as casting counters for arithmetical calculations using the exchequer board (Barnard 1916 and Berry 1974). If this is indeed a monastic establishment (the hospital being run by Augustinian canons) calculations would be an aspect of its life (because of the management of its estates). This would, perhaps, support the contention that jettons are really currency (Dawson 1973 p. 117) which would not be expected to bulk large in a monastic establishment. But it could also be explained if the material is derived largely from the kitchen (though at Writtle the kitchen produced 6 jettons and two coins).

The food prepared in this hypothetical kitchen is evidenced by the mollusca and bone material recovered. The important feature of the mollusca is the wider range of shell fish being exploited here than at Kennington. At Kennington nearly 96% of the mollusca were oyster whereas here the proportion is only 62% (F5) and 67% (F10). Since these two deposits (i.e. from Guy's) are of much the same date, the decline in the significance of oysters in the consumption of sea food may well be a more general phenomenon in Southwark, though the replacements occur in rather different proportions in the two groups. In F5 cockles are the predominant replacement (21%) with a substantial number of mussels (10%) and almost no whelks (6.2%) while in F10 mussels are the main secondary shell fish eaten (18%) followed by whelks (10%) and with very few cockles (4.7%). Without more sites to compare this with, it is impossible to say whether these differences have a wider significance or are merely the result of personal preference. However,

the decline in importance of the oyster is significant because, in South London at least, all earlier sites display this total oyster dominance (Kennington Palace (c1360-1531) London Bridge 69 (Area K 60-80, and a number of pit groups of early 2nd century) and Toppings Wharf (Sheldon 1974 p.111-early 2nd century). However, the number of sites is small, especially for the mediaeval period, and elsewhere in the Middle Ages oyster domination does not always occur (at Northolt, Hurst 1962 p.298 and Pevensey, Dulley 1968 p.232, whelks are commoner or as common). However, in Trench 8 at Montague Close, which should represent a transect of occupation layers in Southwark before 1294, cockles were certainly absent (apart from a natural and very short lived cockle bed; see Dawson 1976b).

It was suggested that the oysters found at Kennington Palace came from a heavily fished, or even overfished, bed as an explanation of their small size (Dawson 1973 p.273). The size distribution of the sample from F5 is very close to that of Kennington, but this similarity is probably misleading because the Kennington sample has a larger proportion of lowers (63%) than F5 (56%). Lowers are, on average, about 5 mm wider than uppers, so that if allowance was made for this, the Kennington sample would probably be a little smaller than the F5 sample. The sample from F10 in T2, however, is about 5 mm smaller, on average, than the F5 sample and this cannot be explained in this way. This then is certainly smaller than the F5 sample and probably than the Kennington sample when adjusted for the upper/lower imbalance. The sample itself in F10 is much smaller than in F5 (159 compared to 459) but there are other differences between the group (for example the differing importance of whelks and cockles) to suggest that the differences are real as does the fact that the smaller average size applies to both uppers and lowers to the same degree. The Kennington sample has a wider date range than the two samples here though overlapping it (i.e. c1360/70-1531).

The difference between F5 and F10 is not likely to be due to a time difference, since this is so small, but it might indicate that those from F10 are derived from a poorer bed (more overfished or less favourable to oyster growth) which must mean that they were, on the whole, cheaper and that they derive, as food refuse, from lower down the social (or wealth) scale than F5. The greater importance of mussels in F10 would point in the same way since they are the commonest mollusc and the easiest to collect and will therefore normally be the cheapest.

Since the evidence does point to the small size of oysters in the late mediaeval period which may be due to overfishing of oyster beds, this would lead presumably to a decrease in the numbers, or at least quantity, available and to concomitant increase in price. This might explain the appearance of other shell fish in the diet at the end of the 15th century. It must be emphasized that this is tentative at the moment, since the number of sites from which this evidence has been extracted is small, but all the signposts point in the same direction. This pattern may only be local to Southwark but there is some indication of a similar pattern at Writtle where three period III pits contain mussels, whelks, and oysters, two of which also have cockles (plus another interesting pit which contained only hundreds of unopened cockles). Period III is believed to date from c1425 to 1521 and one of the pits dates after 1463 on coin evidence. For only one period III pit is any information available and that contained only oysters though whelks did occur in a period I pit (Rhatz 1969). Unfortunately no quantitative information is available.

The environment of the bed or beds from which the oysters in F5 were derived would seem to be very similar to that of those from Kennington. The prevalence of boring parasites is similar (25% and 20% respectively) and the proportion of Polychaete worms (probably *Polydora ciliata* and/or *hoplura* and/or *Dodecaceria* sp.) to the sponge

Cliona celata was exactly the same (80% to 20%). The Bryozoa present, *Conopeum reticulum* and *Amphiblestrum flemingii* are generally associated with waters of low or variable salinity such as estuaries though they can live in fully marine conditions. *Conopeum reticulum* was also present on a shell from Kennington though there another shell had three fully marine species which do not occur in F5. However, the presence of *Cliona celata* implies conditions in which salinity is not too low. The sample from F10 also has similarities to both F5 and Kennington Palace in having 18% of the shells bored and in the presence of the bryozoa *Conopeum reticulum* and *Amphiblestrum flemingii*. It also has one example of *Electra monostachys* which generally only occurs in estuaries, though *Cliona* are more numerous than usual being 40% of the parasites present compared with the 20% in F5 and at Kennington. This may, however, be due to the small size of the sample since there are only 25 bored shells in the sample. Less than 4% of the oyster shells have been in contact with other oyster shells while growing, which suggests that the oyster bed was fairly dispersed and that clutch was not being seeded (Yonge 1960 p.152 ff.). At least two oyster shells were empty when they were imported onto the site since they have Bryozoa on their inside surfaces. The fact that uppers and lowers are more or less in balance shows that the vast majority of the shells were imported with oysters inside them as food. The same applies to the cockles and the mussels both of which have almost the same number of left and right shells and is further evidenced for the cockles by the comparison of their size distribution with those from the cockle bed at Montague Close (Dawson 1976b) which are 10 mm smaller.

As a converse to the wider variety of shell fish eaten at Guy's as compared to Kennington Palace, the variety of other animals present is much reduced, 15 species being represented in F5 compared to 20-22 at Kennington. This is almost entirely because of the reduction in the number of bird species present (6 compared with 9 or 10)

but generally they are domesticated species (or probably so in the case of ferret and Grey Lag Goose and perhaps Mute Swan and Mallard). The only food eaten at Guy's certainly "hunted" is the fish (Cod and Plaice), the Crane and Teal and the crab or lobster. This reduction, particularly in birds, is not a function of the deposit's date since two contemporary groups at Baynard's Castle contained no less than 46 and 47 different species of bird (Bramwell 1975). Baynard's Castle was at this period royal, and Kennington was semi-royal. Writtle, which also produced a wide range of birds and also deer bones in Period III (1425-1521), was in this period held by noble families, the Bohun and Buckingham's. This again indicates that the occupier of the establishment, while rich was not of the highest social rank and presumably did not enjoy the pleasures of the chase. In this respect the presence of a ferret skull is interesting. The ferret is the domesticated version of the polecat, though domestication has produced changes which make it possible to distinguish the two. However, many ferrets have escaped and become feral and interbred with wild polecat populations. It seems unlikely that this one was wild since polecats, and presumably wild ferrets too, live in or near woodland and it is highly unlikely that there was any woodland nearby in the fifteenth or sixteenth centuries. If it was tame, it would most likely be kept for hunting which rather contradicts what has just been said. It may therefore have been kept as a sort of pet or perhaps as a rodent control, alongside the cat.

That he was not poor is shown by the fact that the number of ox and sheep/goat bones are more or less the same (taking the large ones as ox and the small ones as sheep/goat) whereas at Kennington the sheep/goat bones were about three times as numerous. Pig, as usual, is a poor third. Another variation from the Kennington pattern is that more of the sheep bones are immature (13 of those which can be aged out of 36 compared to 1 out of 76 in P63 at Kennington), though only four need be under $1\frac{1}{2}$ years and only 1 less than $3\frac{1}{1}$ months,

while half (18) are over 1 1/2 years (exactly the same as Kennington which is 38 out of 76). This does indicate that the household producing the food refuse at Guy's was much less tied to a wool production dominated pastoral economy than Kennington was but not so much as, for example, Northolt where ox bones are considerably more common than sheep (Hurst 1962 p.295-7).

It is interesting that the material from F10 (T2) though probably not derived from the same source as F5, shows a similar pattern (on a much smaller sample) of approximate equality between sheep/goat and ox bones with pig bones also being a similar proportion. Moreover, of the four sheep/goat bones which could be aged, one is immature. The bones from the other layers are less informative because they are redeposited, quite clearly so with many from layer 8 since they are severely eroded. Nevertheless, they do show a remarkable ox dominance (53 out of 61 bones); completely different from F5 and F10. Since the pottery with which they are associated is Roman, it seems reasonable to assume that the bones are mainly Roman too, and this ox dominance also occurred in the Roman layers at Toppings Wharf (Sheldon 1974 p.110. 107 compared to 35 but minimum numbers of individuals there not numbers of bones).

Analysis of the frequency of different parts of the sheep's body occurring show that the only part definitely underrepresented is the phalanges (3.2% compared to 20%) while the scapula and pelvis are definitely overrepresented (16-19% compared to an expected 3.3%). But although teeth are approximately as expected, they are mostly lower teeth (44 out of 52) and maxilla and horn cores are rare. This suggests that the sheep arrived at the establishment without their skulls and feet, but for some reason with their lower jaws. A similar picture is presented by the ox bones but here the lower jaw too seems to be missing usually (in fact more often than the upper). This does suggest that the meat did not arrive on the hoof but in carcass form with the less edible parts already removed. The overrepresentation of

pelvis and scapula, especially in the sheep/goat, may indeed indicate arrival in the form of already butchered joints, probably from the London meat market.

There is a little evidence as to how this butchery, wherever it was done, was carried out. The association between distal ends of humeri (7 to 1 proximal) and proximal radii (10 to 6 distal) noted at Kennington recurs here, though somewhat less clearly. Likewise there are more proximal ends of femur than distal (4 to 1) but unlike Kennington, the distal and proximal ends of tibia are equal. No pattern can be observed in the ox apart from the similar absence of proximal humeri. This is quite different from today's procedure where shoulder is sold with the humerus still attached to the scapula. The butchery method must have involved the separation of the leg from the shoulder (presumably with a knife) and the removal of the upper part of the humerus from the leg.

The cut across the neck of the ascending ramus of a sheep/goat mandible from F5 may be significant in view of the suggestion made above that the skull was removed from the mandible. That the meat arrived in joints rather than as a carcass may be indicated by the number of vertebra which have been cut (26 out of 43 compared to 16 out of 54 at Kennington), though it may also indicate that the modern method of dividing the carcass into two when cutting it up was becoming more common (25 of 26 could relate to this) and thus may relate to different methods of cooking (i.e. boiling or roasting in pots rather than as carcasses on spits?).

The changes in the pottery assemblage which have been discussed above, have also been related to changes in cooking methods. It has already been stressed that the cauldron type cooking pots are copies of metal cauldrons. Metal ones are often regarded as mediaeval (London Museum 1954 p.207) though the evidence for this is not stated. The only published examples from Southampton (Platt et al. 1975 No.1782 and 1786) are both probably 16th century. It may be therefore that

mediaeval cauldrons (see also Marshall 1950; none of the examples he publishes are dated though there is one in the Ashmolean Museum which he suggests is 13th century) are as rare as mediaeval cauldron type cooking pots (and also imported?).

The crucial differences between the mediaeval cooking pot and the cauldron type cooking pot is the provision of two handles and three solid feet (or four pressed feet). Three feet also occur on pipkins, certainly later in the sixteenth century and probably, in one instance at least, in F5 so that this change is clearly independent of the other. The obvious use for handles is for lifting, but the handles seem too small and too far above the centre of gravity to be used easily for this purpose (this also applies to many metal cauldrons, cf Platt et al. 1975 No. 1782). It seems more likely that their function is suspensory, where their smallness and high position would be advantageous.

Barton (1975 p. 119) associates them with the removal of the fireplace from the centre of the room to the wall, and this would certainly provide a convenient means of suspending the pot over the fire instead of placing it in the ashes. But it is difficult to accept this simple equation since wall fireplaces were common, at least in stone built houses, in the Middle Ages and it would not explain the restricted distribution of cauldron type cooking pots. It would also imply that wall fireplaces were much commoner in the Middle Ages in the Netherlands and the Rhineland than in England, which does not seem to be the case. Moreover, the drip pans which also become (relatively) common at this period are directly connected with spit-roasting and Dutch painters show them being used in central hearths, although spit roasting was also done in wall fireplaces.

The greater commonness of drip pans in the 16th century may be due to an increase in basting since one of their principal functions is to provide a quantity of fat which can be poured back over the

meat (see Clair 1964 p.160-161 picture of 16th century Dutch kitchen by Peter van der Borcht). The lips with which they are provided (5 at Guy's, out of 10, certainly have lips and others could have had) suggests that the fat was also kept for other uses, unless the whole pan was picked up and the fat poured over the spit roast in basting, which seems unlikely..

The other form of cooking pot, the pipkin, was also provided with a handle but quite clearly in this case for lifting and not for suspension. These were not merely pushed into the edge of the fire for the smoke blackening occurs on all parts of the body though not on the handle (cf handle and body sherd in Guy's ware for good example of this). This means that the handle projected beyond the fire but that the whole of the body was over the fire. It may therefore be that the fire was contained in some way and not allowed to spread. Since tripods are provided for both this type and the cauldron type cooking pot which we have suggested is suspended over the fire, they cannot be associated with a necessity for the pipkin to sit upon a surface when being cooked (i.e. some sort of primitive stove) though such may be indicated by the frying pan which would presumably need some structure to support it over the fire.

If the feet were not connected with changes in the method of cooking, they might be connected with what happened after the cooking. It is hardly likely that the change which necessitated them was the introduction of the table, since these were certainly common in the Middle Ages, at least in halls (where commoners eat as well as noble). It may be, however, that the change which occurred was that the cauldron type cooking pots and pipkins were also eaten out of at table, which would require that they could stand on a flat surface. There are 16th century Dutch pictures which show grape or pipkins being eaten out of at table and the pit group from Lincoln's Inn Fields would also suggest this (Thorne 1970; the argument for this

is too long to be deployed here). It is difficult to imagine that the mediaeval cooking pot could be easily eaten out of, and presumably the food was transferred to wooden bowls or plates for actual consumption. In the same way, wooden cups for drinking from were replaced in the 16th century by pottery vessels (see Matthews and Green 1970). They seem to have been replaced at Guy's by two types of vessel, mainly by the Raeren mug but also by the much rarer Surrey White Ware and Cistercian Ware cup. However it does seem likely that in the middle ages the jug also served as a drinking vessel but at the same time as a storage vessel for liquids. It may be that the change which takes place at this period is that these functions are split, the storage function being performed by the pitchers and the drinking function by the Raeren mugs. In Surrey Wares, the drinking function is believed to be performed by the cups which would suggest that the jugs perform the storage function (I find it impossible to follow Green (1970 p.7) in believing that these were intended for drinking because of the provision of a lip) were it not that they are rather smaller than the red ware pitchers (some pitchers were made in Sandy Surrey Wares cf. Marshall 1934 but are rare) and seem to be too fine to be confined to the kitchen (especially No.14 with its decoration) and the same applies to the Guy's Ware jugs. These are rare compared with pitchers (4 to 22 counting handles). They perhaps perform the function that jugs on the table perform today, of providing a small store from which the cups could be replenished. The similarity in numbers between jugs and cups (4 to 5) certainly suggests that they are associated.

Since Raeren mugs are so common, they must be the run of the mill drinking vessel of this period while the Surrey White Ware and Cistercian Ware cups are much rarer, and are also much finer (delicate?) and so are perhaps to be regarded as the Sunday best, if indeed they are for drinking out of. Counting the number of handles, since each

has only one, to give a proportion in F5, there are 5 Surrey White Ware and Cistercian Ware cups to 23 Raeren mugs. There are certainly more of each type present but the proportion is probably about right. Since the Surrey/Cistercian/Guy's Wares are more 'prestigious' they are likely to have been used for the consumption of a more expensive beverage than the Raeren mugs (wine as opposed to ale or water?).

It is not clear whether substitution took place because of increasing wealth in which the cheaper substance (wood) was replaced by the dearer (pottery) or whether the reverse is taking place in which an increase in the price of one commodity (wood) leads to its substitution by a cheaper one (pottery). One clear indication of increasing standards of comfort is, however, provided by the advent of the chafing dish. This would seem to indicate that some elements in the establishment at least (since only about 7 or 8 occur perhaps not everybody had one) were no longer prepared to tolerate eating the cooked food cold (though metal chafing dishes occur in the Middle Ages, they do not long predate Guy's (see Lewis 1973)). Likewise the condiment dishes may indicate increasing 'refinement' or merely the substitution of pottery for metal. The watering can (so called) may also be evidence for increasing fastidiousness since it seems likely that some or all were used for dispensing scented water in the house to hide unpleasant smells.

The exact function of the bunghole in the pitchers is also unknown. It seems unlikely that all pitchers had bungholes since only 8 occurred compared with 22 handles and if each pitcher had one of each they should occur in roughly equal numbers. Therefore the pitchers must have performed two different functions, those without bungholes perhaps for simple storage of liquids in fairly large quantities (in the kitchen or other service room?) and those with bungholes for the distillation of some liquid.

Much of these changes can thus be seen merely as substitution, pottery being used for what was formerly made of wood or metal.

The problem here is, of course, that metal vessels last longer while in use but when buried last considerably less well than pottery (this also applies, of course, to wood). Therefore pottery is always likely to be overrepresented in the archaeological record. Nevertheless, the metalwork from Guy's is very impoverished. Apart from the nails, the only certainly identifiable objects are the small hammer head from L11 and the socket from L10 which must have taken the handle of some tool. Besides this there is a possible chisel, spatula (rod with spatulate end, see Moorhouse 1972c p.38 No.12), and possibly, a sliding bolt) ('T' shaped piece - see Moorhouse 1972c fig.22 No.120). Furthermore there is also a large number of strips of thin metal which may be the decayed remains of knife blades. The one with a hole is clearly not but must have been attached to something (it is not dissimilar to Moorhouse 1972c fig.24 No.144, but the function of that is unknown). Only the bronze vessel from L11 suggests the use of metal in competition to pottery and this is not reconstructable. The copper objects from Pits 1 and 3 could well be later and this is almost certainly the case with the thimble (because of its vertical sides and flattish top, see Moorhouse 1972c p.60). The metalwork from T2 (which is mainly from L5 and F10) closely resembles that from T1 except for the piece of lead which may be a piece of roofing lead (its thickness is similar to those at Kennington see Dawson 1973 p.46). This poverty of metalwork might support the idea that the significant change is one of substitution in which case the inferences regarding cooking etc. are weakened.

CONCLUSION

This report has included an extended interpretation of the material recovered, too extended some might think. But artifact studies have now reached the stage where the basic sequential development has been, in most areas, worked out. Progress will only come from attempts to fill in the interstices of this framework with small pieces of infill, a much less glamorous stage than building

the initial framework and requiring an attention to detail which seems to come hard to archaeologists. An attempt has also been made to interpret these finds as the product of economic, social and technological conditions at a particular time and place, both in their 'production' and use. This is a field in which surprisingly little has been attempted before, which makes it all the more difficult. The important point about this type of interpretation apart from the fact that it is, and is likely to remain, somewhat speculative, is that it requires large samples. Not only does this mean large samples from a particular site but also large numbers of sites. Repetition of a particular pattern may appear unexciting, and even be regarded as not adding to knowledge, but it is absolutely essential, if this type of study is to be placed on a sure footing. It is lucky that there are, for the period with which we are principally concerned at Guy's, a fair number of comparable groups, many of which are quite large. But even so, few are published and all are defective in that selectivity clearly entered into the collecting policy and the principles behind this are usually unknown. I must confess to erring in this way myself at Guy's since building material was only haphazardly collected, perhaps the worst way there is, and the faunal material was recovered in arbitrary samples which were far too small.

In the present Rescue Situation, these concepts may be felt to be daunting, even impossible. Yet without them artifact studies, and with them archaeology as a whole, will stagnate and even fossilize.

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SyAC *Surrey Archaeological Collections*
 Res Vol SyAS *Research Volume of the Surrey Archaeological Society*

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