Medieval Ceramics 13 (1989) 3–8.

The Continuing Tradition
The Eighth Gerald Dunning Memorial Lecture

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SUMMARY

The study of medieval pottery from mainly archaeological evidence can restrict the understanding of its manufacture, development and use. In order to widen the horizons of pottery research, and to suggest areas for further study, a survey of all the apprentice-trained producers of hand-made traditional pottery was carried out in the 1960s. The detailed working practices of these potters have already been published elsewhere, but here they are discussed in general, overall terms, commencing with clay preparation and throwing techniques. Those factors which govern the size and shape of the wares, including manufacturing requirements, load-bearing capacities, ergonomic considerations, and the need to serve distinct practical purposes are then discussed. The effects of different fuels and firing conditions are also considered, and, finally, the potters, methods of transport and trading, to demonstrate some of the human elements in their industry which archaeology could never reveal.

It was in the early 1960s that I first began to take an active interest in excavated pottery. At that time the relevant sources of information were very sparse, since the classic late 19th-century volumes such as Jewitt (1883), Solon (1885) and Chaffers (1891) still provided the major accounts of the hand-made pottery used in England during the medieval and later periods. The only newer works of any quality were Bernard Rackham's *Catalogue of the Glaisher Collection* (1934) and *Medieval English Pottery* (1948), both of which tended to follow the art-historical tradition of ceramic research. Since then the whole scene has changed beyond recognition as standards of excavation, recording and finds research have advanced at a previously inconceivable rate. These improved techniques have added enormously to our knowledge of English ceramics, especially when interpreted through the pioneering works of Gerald Dunning, John Hurst, Kenneth Barton and others. There may now be a slight tendency, however, to apply scientific recording techniques on sherd-counts, fabric types, glaze colours, etc. beyond a practically useful level. The object of the study of any piece or group of pottery is to determine where, when and how it was both made and used. This evidence helps us to reconstruct early trade routes or trading areas, discover culinary and eating habits, and understand the development of both ceramic technology and the influences which effected the shape and use of individual vessels. Although it may appear to be stating the obvious, it is always worth remembering that the life-style of human beings is an incredibly complex tangle of beliefs, customs, practicalities, environmental factors, economics, relationships and so forth of which the archaeological record can cast only the faintest of shadows. You have only to imagine your own life-style being interpreted from the imperishable contents of your back-garden and dustbin, for example, to consider how incomplete or misleading basic archaeological evidence can be.

In order to try to understand how the early post-medieval pottery functioned both as a production unit and as a service to the local community, I decided to visit and interview all those potters who had been apprentice-trained into their craft within those traditional earthenware potteries which still converted local clays into useful wares during the opening years of the present century. Hopefully their attitudes, working practices and memories would help to throw light on the domestic pottery trade of earlier centuries. Fortunately quite a reasonable number of these men were still active and able to pass on their information during interviews usually held on their premises and backed up by further correspondence as necessary. They included Richard Bateson of Burton-in-Lonsdale and George Curtis of Littlethorpe, both in North Yorkshire; Isaac Button of Soil Hill, West Yorkshire; Arthur and Reg Harris of Farnham, Surrey; Bill Lake of Truro, Cornwall; and Harry Thorburn of Weatheriggs, Cumbria. Regrettably Mesech Sims of Verwood, Dorset, and Fishley Holland of Fremington, North Devon, had recently died, although the latter's *Fifty Years a Potter* (Holland 1958) had already recorded a vast amount of unique information. Detailed descriptions of the working practices of all these potters have already appeared in print, and so the opportunity is taken here to discuss a number of aspects of their activities in general terms, particularly since they might help us to interpret the archaeological evidence of the medieval pottery industry.

The most obvious factor influencing the manufacture of sound pottery was the availability of good clay, the methods of clay preparation remembered from the early 20th century apparently being little different from those of the medieval period. The best of the raw clays only required to be weathered for a year and kneaded (i.e. wedged) before being thrown, a natural tempering of fine sand and a lack of any unwelcome impurities making any further preparation unnecessary. In areas such as Cumberland, the clays had to be dissolved in water and dried off in settling tanks to remove the limestones and other inclusions which would have caused large blisters to form in the thickness of the pottery during firing, while at Farnham additional sand had to be trodden in to prevent the undue shrinkage and warping of the ware. Obviously these processes were extremely time-consuming, placing the potters with these problems at a disadvantage, unless they were protected from external competition by such factors as cheap fuel, cheap transport, or cheap living.

Having prepared the clay, it had then to be converted into pottery, the techniques of throwing presumably changing little since the medieval period, even if the source of power had progressed from human muscle to steam and then to electricity over the past century. In terms of scale, the potters were only limited by the length of their arms for height, while the diameter of the pot was restricted by the working diameter and power of the wheel and the physical strength required to control the clay. For these reasons weights of over 56lb were very rarely thrown, most pottery being an eighth or less of this considerable mass. The speed of throwing was also of the greatest importance; a fast speed was usual for centering the initial lump of clay on the wheel before it was hollowed, while a very slow speed was required for wide or flat vessels, to reduce the centrifugal force which would otherwise cause total collapse. Most of these vessels were thrown on a wheel which was powered by slowly rotating a cranked axle, a heavy wheel-head providing the necessary smoothness of motion.

A number of technical considerations determined the shape, size and construction of the pots. It was advisable to maintain an even thickness of clay throughout the vessel, for example, to prevent warping and cracking during both drying and firing. This was achieved by the skilful handling of the rotating mass of clay, the water used as a lubricant producing a distinctive layer of 'throwing slip' over the inner and outer surfaces. The hands of even the most dextrous potter required a quantity of water to prevent them from dragging the clay off-centre, besides which they left distinct shallow rills on the walls of the vessel. To alleviate these problems, the potter might use a variety of 'ribs', these being small wooden, stone or metal tools which replaced the potter's fingers for the final shaping process. Having less drag on the clay, they required less lubrication, and hence cut down on the build-up of throwing slip, a characteristic which may be noted on some fired vessels. In addition, the ribs might be cut to a particular profile to readily bring rims, lid-seatings and bases into precise, repetitive, pre-determined forms, while others could be used to indent concentric ornamental borders and similar features into the walls of the vessel as it rotated on the wheel. The thrown profiles of the rims were frequently designed to facilitate further manufacturing processes. For example the pronounced outer curve of a bow-rim enabled an internal coating of slip or glaze to be poured out leaving a neat edge, while the heavy rims of 18th – 19th century baking bowls were essential for supporting the entire weight of these large vessels when held up by ring props during the firing.

The shapes into which the bodies of the pots were thrown also played an important part in ensuring that they successfully survived the firing process. As the heat from the fires increased, the water remaining in the clay was driven off, causing the whole stack to shrink. Thermal expansion then caused the stack to grow once more, only to shrink more than ever when the clay particles fused together into hard, insoluble pottery. At the Farnham potteries this movement of the kiln load was used as an indicator of temperature, a spy-hole towards the top of the kiln enabling the height of the stack to be judged against the corbelled bands of bricks on the internal kiln wall opposite, the firemouths being drawn and sealed only when sufficient shrinkage had occurred.

Since virtually no kiln furniture was used in the English handmade pottery tradition (except for cups and similar forms from the late 15th century and larger bowls and dishes from the late 18th century), those pots at the bottom of the stack had to take the full weight of all the other pottery stacked for anything up to 10ft above. Their strength was therefore of prime importance, for the collapse of the kiln load would ruin weeks of work, waste expensive and hard-won supplies of clay, glaze and fuel, and create days of hard work in hacking out the resulting fused mass of wasters, besides losing valuable trade at the markets. The strongest shapes were those that followed pure geometric forms, particularly cones, spheres and, to a lesser extent, cylinders, most vessels combining these together to create thoroughly practical vessels (e.g. jugs with inverted truncated cones rising from the base, spherical shoulders, and cylindrical necks). It is significant that negative curves in a pot's profile (e.g. between the shoulders and the neck) were the first places where distortion and collapse occurred, as could be seen on a number of vessels shown at the Chester meeting in 1989 (see below).

Another contributory factor in achieving successful firing was the uniformity of the heights to which the pots were thrown. This enabled the pots to be built up layer by layer in the kiln, the inverted neck or rim of

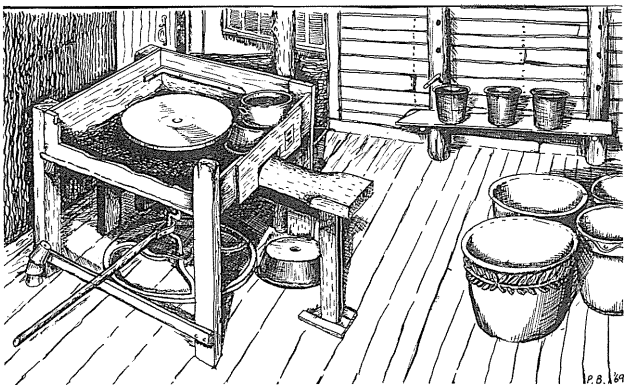

Figure 1. Crank wheel at Wrecclesham Pottery, Farnham, 1969.
Used for throwing large vessels, this wheel was powered by a man who sat at the left hand side, and turned the wheel by means of the wooden rod. Note the large flywheel which helped to produce uniform motion throughout the throwing process.

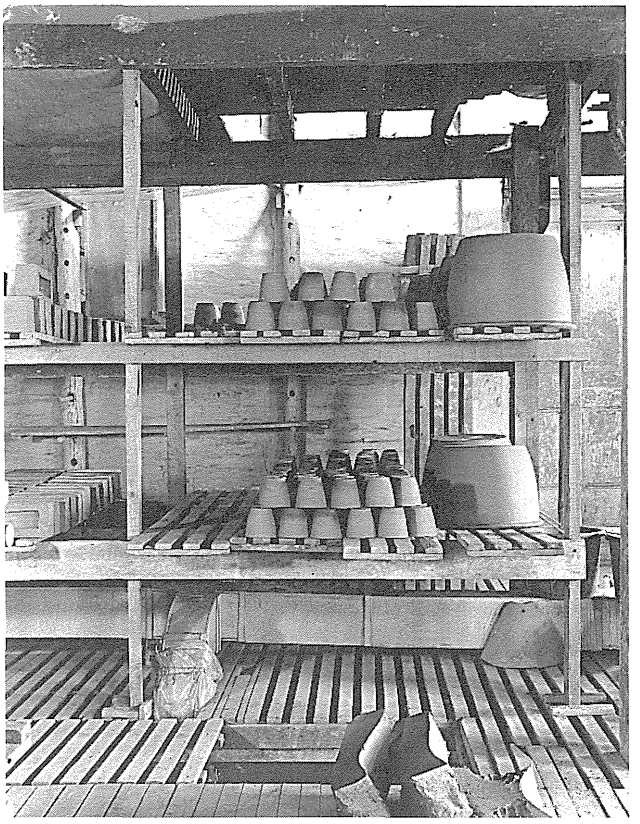

Figure 2. The drying area, Wrecclesham Pottery, Farnham, 1969.
See how the plant pots are stacked in even layers, the accuracy of the hand-throwing being essential for building the wares up in this way. The older form of drying rack, with pot-boards mounted on horizontal pegs pushed into holes in vertical wooden posts, is seen against the back wall.

one perhaps resting on one or three up-turned bases of the layer beneath. This arrangement ensured the greatest stability during the movement of the stack, in addition to making the maximum efficient use of the kiln's interior space. In a loosely-packed kiln, the flames could rush directly up the inner surfaces of the walls, and out into the open air, resulting in a great waste of heat and fuel, and an unequal distribution of temperature, whereas a closely-packed kiln retarded the progress of the flame, so that the heat built up gradually through the stack, giving a good even temperature and the minimum effective fuel consumption.

In addition to the potter's own design requirements, it is obvious that every vessel had to fulfil all the practical demands made upon it by the user. The uses to which different forms of pottery were put can be determined from a variety of sources ranging from illustrations in medieval illuminated manuscripts, armorials, 16th–19th-century paintings, archival references in domestic or industrial account books, cookery books, literary sources in contemporary poetry and prose, archaeological evidence providing datable contexts and environments, the pottery itself, with its appropriate decoration or evidence of use (knife cuts, spoon marks, heat scars etc.), and ethnographic research through antiquarian writings or the memories of the older generation. From these we can learn why pots were made with their particular characteristic shapes — why the rims of albarellos or jars had constrictions beneath so that their coverings of soft leather or bladder could be firmly tied down; why oil, syrup or honey jars had wide necks; why butter pots were made non-porous and of a specific volume, or why large cylindrical open-topped pots (including medieval cooking pots?) were ideal for the preservation of meat in thick fat. Similarly we can trace how the bung-holes in brewing jars were placed a little above the base to leave room for the internal wicker-work malt-strainer or betony, and leave sediments undisturbed, or how large jars of fruit, ale or yeast were sealed with waxed corks before being buried in the ground for long-term storage. Since the potters sold directly to their customers and were also fully participatory members of the community they served, they were in an ideal position to make just what was needed to fulfil the industrial and domestic requirements of their locality. Similarly they had to accommodate a variety of ergonomic requirements, for their customers would not be slow to point out the difficulties they were experiencing with ill-fitting handles, awkwardly-balanced bodies, or rims from which it was impossible to drink without slobbering.

The potters also knew what would serve the social and communal needs of their customers. Their wassail bowls, posset pots, and caudle cups were not only thoroughly practical, incorporating drinking spouts, strainers, multiple handles and perhaps pedestal bases, but their decoration demonstrates a deep knowledge of local customs and practices, particularly from the

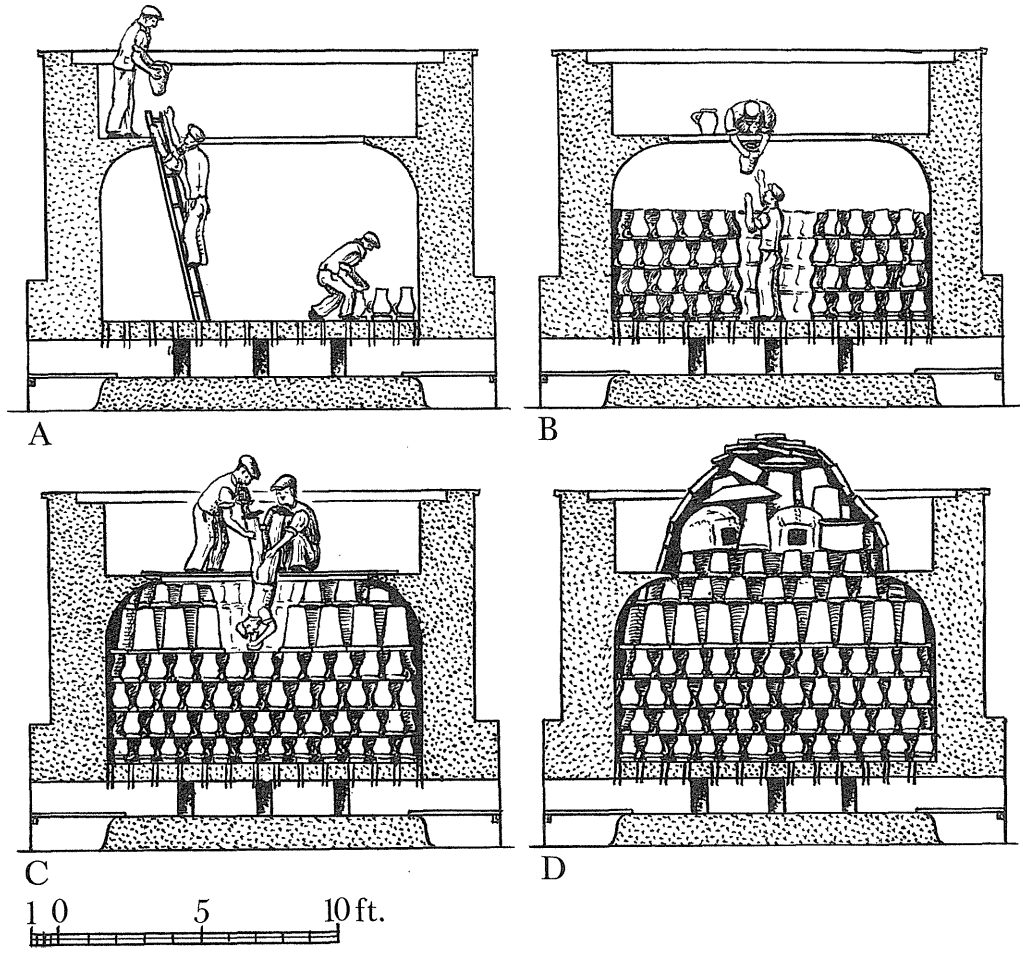

Figure 3. Packing the kiln at Truro Pottery, early 20th century.
On Monday four layers of inverted pitchers were built up from the kiln floor, the lowest being supported on pieces of thin tile (A). The packer was then lifted from the centre of the stack, turned upside down, and held by the legs until he had packed the space in which he had been standing (B). On Wednesday the packer stood on small boards on sacking on top of the stack to add the next layers of buzzas and plantpots, two planks then being placed across the top of the kiln so that he could be inverted once more to fill the place where he had stood (C). On Thursday further layers of pottery were added to the stack, then sides being sealed with 'backs' 18" × 12" × 2" (45 × 30 × 50 cm.) slabs of fireclay bound together with plough chains and with their joints sealed with river mud. A layer of broken pottery was then piled on top, and the load was ready for firing (D).

The necessity for dimensional accuracy, for strong shapes, and for highly competent throwing is well illustrated by this procedure.

seventeenth century onwards. From the same period the potters began to appreciate the volume of sales which could be generated by producing commemorative wares reflecting political movements (e.g. the Royalist slipwares of Thomas Toft) or important events (e.g. the birth of Siamese twins illustrated on Donyatt sgraffito plates of 1688.

Perhaps the most important cultural factor influencing the shapes into which the potter threw his wares was the range of pottery which he saw around him. Given the relative uniformity of the contemporary ceramic technology, it would be very easy to adopt features seen on wares made in another region or another country. Early this century for example, a number of potters began to produce Tudor Greens, French provincial pottery, or 17th-century style slipwares, while in the 1960s much of the Provençal pottery sold around Brighton was made just outside Ripon in North Yorkshire, these wares generating a good income by imitating pottery which was most fashionable at that time. It would be interesting to investigate if regional styles of medieval pottery showed a similar spread of distinctive features from particularly innovative foreign or native potteries.

Not only ceramic items were copied in this way. Fifteenth-century pottery salts and chalices and 17th-century posset pots took their shapes from contemporary silverware, medieval chafing dishes and aquamaniles, and post-medieval candlesticks took their shapes from bronze originals, 18th-century Dutch ovens took their shape from sheet ironwork, and 17th- to 19th-century cradles, knife boxes, harvest barrels, churns, piggins and plates all took their shapes from wooden predecessors.

Having completed the shaping of the pottery, it was dried out, usually in the open air, avoiding all chance of

frost, for this would expand the water remaining in the ware, ruining it completely. This factor suggests that pottery making would have to be a seasonal occupation, being carried on between spring and autumn, although much useful work on clay digging and preparation, and on fuel gathering could be completed during the winter months. Evidence for the artificial drying of the damp pottery using coal or wood-fuelled stoves is virtually non-existant before the early 19th-century, and then only in the larger potteries. At Truro, pottery making was still being carried out solely during the warmer months as late as the opening decades of the present century.

Just before the wares were perfectly dry, they were coated where necessary with a lead-based glaze, raw lead ore (galena), or lead oxide (litharge) converted at the pottery from metallic lead, being made into thick pastes or solutions with slip and a range of additives throughout most post-medieval English potteries. At Farnham, the galena was mixed with fine sand to make a paste which could be brushed onto the ware, this practice perhaps being a survival from the 15th century, since the results are visually similar to those found on Tudor Greens. The earlier practice of dusting the wares with galena or litharge, as described by Dr. Plot in Staffordshire in 1686, did not survive through to the present day, and the continuing tradition had no memories of this ever being carried out.

In general terms, the kilns used to fire the wares made in the traditional potteries of the late 19th and earlier centuries were large-scale versions of some of those used during the late medieval period. In the north, the small clay, or clay and stone, multiflued kilns fired with wood, peat and the like developed into large brick-built coal-fired multiflues with improved designs of fire-mouth. Producing oxidised pottery virtually continuously, their wares emerged in a range of evenly-coloured yellows, buffs and reds, the only distinctive feature being the occasional appearance of a fine yellow curd-like deposit in the glaze where the flow of hot gasses in the kiln had been insufficient to burn off the sulphur content of the glaze. In the southern potteries, the medieval tradition of building wood-fired kilns with a flue system at the base to mellow the heat of the flames, an open-topped cylindrical firing chamber above in which the pottery was stacked, and a temporary dome of sherds etc., on top, survived through to the mid 20th century, the last exponents being at Truro and at Verwood. Wood firing produced a wide range of conditions extending from full oxidation to full reduction, depending on the dryness of the fuel and the particular methods used to control the kiln. On asking Bill Lake of Truro how old a piece of pottery might be, he was rarely able to give any ready answers in terms of years, but instead gave an estimate of the month in which it had been fired, apparently being able to do this with a fair degree of accuracy. He then went on to explain that the colour of the glazed pottery changed at a fairly regular rate from spring through to autumn. At the opening of the season the gorse they had gathered for fuel over the winter months was still wet with sap, thus producing a smoky reducing atmosphere, which in turn produced an olive-green glaze. As the fuel dried out, the green tones proceeded from khaki to buff, so that by the end of the year the fuel, by now completely dry, was giving excellent oxidising atmospheres, and hence bright orange-red glazes. It is interesting to consider if the colours of glazed sherds excavated from medieval pottery sites could be graded according to colour to give the approximate period of peak production. Mitigating against this, however, is the problem that the degree of oxidation/reduction could vary considerably within a kiln, so that a single vessel can exhibit a full range of firing condition across its surfaces.

Once the fired pottery had been drawn from the kiln it had to be distributed. The memories of most of the potters interviewed extended back to the days when horse-drawn carts and waggons were used to carry the wares to local major customers, earthenware dealer's shops and market centres. Straw was packed around the pots, either inside the body of the cart, or within open-framed crates made by the local underwood industry, in order to prevent extensive damage as the vehicle jolted along the unmade roads. Presumably identical methods were used in the medieval period, along with pack-horses, so that any complete study of a kiln site should consider the transport routes essential for moving clay, fuel and glaze materials to the potteries, and then moving the wares out to their points of sale.

One of the most useful lessons to be learned from the last generation of potters was that the individual potteries were usually precariously balanced on an economic knife-edge, the slightest problem frequently causing the whole enterprise to close down either for a period, or even for good. Among the more obvious reasons were the discovery that the clay was no good for potting, the collapse of a kiln, the competition from neighbouring establishments, or the termination of a lease. Other reasons included social pressure on the potters to move their muddy, dirty and smoky activities beyond the confines of their village or town, this in some instances being arranged by a bond, in which the residents agreed to pay the potter a certain sum if and when his removal was completed. Even the drinking habits of the pottery staff could prove disastrous. At Truro, for example, the late 19th-century Lake's and Venn's potteries appear to have been evenly matched, both depending heavily on the sale of buzzas, or pilchard-pickling pots, which were required in bulk when the shoals arrived off the local ports. Lake's driver was not a regular drinker, and so was able to arrive in good time to sell his entire load. Venn's driver, meanwhile, always drank at a number of hostelries en route, so that his horse habitually halted

outside each one in turn, refusing to move until the usual period had elapsed, even when the driver was in the greatest haste. As a result, the trade in buzzas had been satisfied by the time he arrived at the ports, all profit was lost, and Venn's were eventually forced into liquidation.

It is always well to remember that human factors of this nature, although the most ephemeral, surviving only as long as the memory, can be the most decisive in determining the progress of material culture and economic development. Hopefully, this general account of the work of the last generation of those English potters who converted their local clays into useful wares will prove useful in interpreting the activities of their predecessors over the past millenium. Further details of their lives and working practices will be found in the sources listed in the following bibliography.

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Resumé

L'étude des poteries médiévales à partir de données essentiellement archéologiques peut réduire la compréhension de leur fabrication, de leur développement et de leur usage. Afin d'élargir les horizons de la recherche en céramique, en proposant de nouvelles aires d'études, a été entrepris dans les années 1960 un inventaire de tous les producteurs de poterie artisanale traditionnelle ayant suivi un apprentissage. Les habitudes de travail détaillées de ces potiers ont déjà été publiées. Elles sont commentées ici de manière générale, depuis la préparation de l'argile aux techniques de tournage. Ces facteurs qui déterminent la taille et la forme des produits, y compris les impératifs de production, leur résistance aux charges, les considérations ergonomiques et le besoin de répondre à des utilisations différentes y sont argumentés. L'action des différents combustibles et des atmosphères de cuisson est aussi envisagée, et enfin les modes de transport et de commerce des potiers, afin de montrer les aspects humains de leur industrie que l'archéologie seule ne révèlerait jamais.

Zusammenfassung

Das Studium mittelalterlicher Keramik aus hauptsächlich archäologischen Funden kann das Verstandnis auf ihre Herstellung, Entwicklung und ihren Gebrauch beschränken. Um den Blickwinkel der Keramikforschung zu erweitern und mögliche Forschungsgebiete vorzuschlagen, wurde in der 60er Jahren eine Untersuchung unter allen ausgebildeten Herstellern von handgemachter traditioneller Keramik durchgefuhrt. Die genauen Arbeitspraktiken dieser Töpfer sind bereits anderswo veröffentlicht worden, hier aber werden sie unter allgemeinen, überprufenden Gesichtspunkten diskutiert, angefangen bei der Tonvorbereitung und Drehetechniken. Die Faktoren, welche die Grösse und Form der Waren, die Voraussetzungungen ihrer Herstellung, die Belastungsfähigkeiten, die Ergonomischen Überlegungen und die Notwendigkeit, bestimmte praktische Zwecke zu erfüllen, werden anschliessend diskutiert. Die Auswirkung verschiedener Brennstoffe und Brennbedingungen werden ebenso berücksichtigt, und schliesslich die Transport- und Handelsmethoden der Töpfer. Damit werden einige der menschlichen Umstände ihre Industrie aufgezeigt, die archäologische Methoden allein niemals enthullen könnte.