

EVERYDAY PRODUCTS IN THE MIDDLE AGES

The medieval marketplace is a familiar setting in popular and academic accounts of the Middle Ages, but we actually know very little about the people involved in the transactions that took place there, and how their lives were influenced by those transactions. We know still less about the complex networks of individuals whose actions allowed raw materials to be extracted, hewn into objects, stored and ultimately shipped for market. With these elusive individuals in mind, this volume will explore the worlds of actors involved in the lives of objects. We are particularly concerned with everyday products - objects of bone, leather, stone, ceramics, and base metal - their production and use in medieval northern Europe.

The volume brings together 20 papers, first presented at the event 'Actors and Affordable Crafts: Social and Economic Networks in Medieval northern Europe', organised by the Universities of Bergen and York in February 2011. Through diverse case studies undertaken by specialists, and a combination of leading edge techniques and novel theoretical approaches, we aim to illuminate the identities and lives of the medieval period's oft-overlooked actors.

This collection then, does not engage directly with the traditional foci of research into medieval crafts - questions of economics, politics, or technological development - but rather takes a social approach. Neither are we concerned with the writing of a grand historical narrative, but rather with the painting of a number of detailed portraits, which together may prove far more illuminating than any generalising broadbrush approach ever could. In so doing, this book will draw attention away from the emergent trend to return to systems and global models, and will restore to centre stage what should be the archaeologist's most important concern: the people of the past.



EVERYDAY PRODUCTS IN THE MIDDLE AGES

Gitte Hansen, Steven P. Ashby and Irene Baug

EVERYDAY PRODUCTS IN THE MIDDLE AGES

Crafts, Consumption and the Individual
in Northern Europe c. AD 800–1600



Edited by

Gitte Hansen, Steven P. Ashby and Irene Baug

Chapter 20

If sherds could tell: imported ceramics from the Hanseatic hinterland in Bergen, Norway. Producers, traders and consumers: who were they, and how were they connected?

Volker Demuth

The urban archaeology of medieval Norway is in one respect similar to that of other medieval European towns; pottery forms by far the largest amount of finds. However, unlike the situation in any other European country (other than Iceland, which was always closely connected to Norway during the Viking and Middle Ages), no pottery was produced in Norway prior to the 17th century. Thus, pottery found in a medieval deposit anywhere in Norway could only have reached its findspot after having passed through a complicated network of diverse actors. This network is likely to have been of a largely maritime nature, as medieval pottery in Norway is almost exclusively found in coastal settlements. The dominant actor in the North Sea and Baltic region in the 14th and 15th centuries was the Hanseatic League. These facts, reliably and repeatedly shown by historiographical sources and research, give us macro-level information, very largely about politics and economy. In rare cases, written sources also tell us about individuals and their activities in the Late Middle Ages. Yet such sources are rather scarce, and references are usually limited to the small number of privileged persons in medieval society. The majority of people and commodities that formed the basis of medieval society and trading networks remain invisible in the written records. On the other hand, archaeological material – and, in particular, anonymous bulk finds such as pottery – constitutes direct evidence of the activities of numerous unidentified individuals. This makes archaeological material such as imported pottery a unique source for the study of the actors in the Hanseatic world, and the networks of exchange within which they operated. In this study, western Norway and the hilly banks of the river Weser in Northern Germany form the endpoints of the chain of connections and interactions represented by the examined material.

Amongst the numerous finds in the archives of the Medieval Collections in the University Museum of Bergen, pottery is one of the largest material groups. To date, little of this pottery has either been identified as a known ware (i.e. of certain

technological characteristics and with a specific origin), or has been analysed as a source for cultural history. Yet, a number of studies of well-defined ceramic wares from England (Blackmoore and Vince 1994), France (Deroux *et al.* 1994) and the Rhine area (Lüdtke 1989) have shown the great scientific potential of the Bergen finds. Thus, the author decided to examine the finds of late-medieval stoneware and early-modern painted earthenware from southern Lower Saxony and northern Hesse in Bergen.

This paper will discuss the pottery produced in a well-defined area of the Hanseatic inland of Northern Germany: the Upper Weser region, which lies in the German federal states of Niedersachsen and Hessen. This rural area has a long tradition of pottery production dating back to the Middle Ages, and in some villages surviving to the present day. The characteristics of this pottery enable us to identify it even amongst the vast quantities of archaeological finds from larger cities such as Bergen. In what follows, after a brief introduction to the material itself, the interpretation of the material will be discussed, with a particular focus on the following questions:

- Who were the producers?
- How was pottery traded, and who may have participated in this trade?
- What purpose did the traded pottery fulfil?
- Where was the pottery used in Bergen, and by whom?
- What mental and/or social aspects of life may be accessed through analysis of the pottery or its use?

Introduction

Lower Saxon stoneware and Weser- and Werra slipware as archaeological finds: Potters, production area, typology and chronology

The material presented and discussed here comprises two distinct ceramic wares produced in a number of workshops in the hilly area along the rivers Weser and Werra, in the south of the German federal state of Niedersachsen (Lower Saxony). Even today, this area is known as 'Pottland', due to the potteries in many of the villages. Along with simple earthenware for different household needs, from the 13th century onwards elaborate tablewares were produced here. In the second half of the 13th century, improvement of ceramic technology resulted in a new form of pottery: 'stoneware'. This ware was made of special clay and fired at a high temperature, resulting in an almost-fused or completely fused fabric. Some stonewares were covered with an iron wash, that produced a glossy red or brown finish (Stephan 1981). The technology for this advanced ware was most probably developed in pottery centres in the Rhine and Meuse area, where fused stoneware was already being produced in the early 13th century (Stephan 1988). In the hills of the Lower Saxon 'Pottland', the special clays from the Tertiary period that are necessary for the production of stoneware could be found near to villages like Coppengrave, Fredelsloh/Bengerode and Duingen. Sources of this type of clay are quite rare, and only a few deposits are known for certain. For these geological reasons, the Rhine/Meuse area and the hills along the river Weser were for a long time almost the only significant areas of stoneware production in

Europe. From the late 14th century on, production of stoneware started to take place in Saxony, with the best known production site there being Waldenburg (Gaimster 1997). Stoneware was also produced in northern France, though primarily for regional consumption.

In the 12th and 13th centuries, northern Germany was characterised by the founding of villages and towns in previously sparsely populated areas. This development generally required a high degree of human mobility. Furthermore, from Early Modern times it is well known that 'wandering' was an integral part of any craft education. After apprentices had learned the basic technical skills of their craft, they had to 'wander' for 2 or 3 years as journeymen, improving their skills by working away from their homes, at different places and with different employees. It thus seems reasonable that the distribution of technology in crafts like pottery manufacture may be explained, at least in part, by these 'Wanderjahre' ('walking years'), which until recently formed an important part of the education and tradition of craftsmanship.

However, at the same time there was a strong local tradition of pottery in the areas discussed, and stoneware-production in the 'Pottland' may have begun with local potters who had worked for a time in the area of Rhine and Meuse (as journeymen, for example). It also seems possible that potters from these western German production centres moved some 200 kilometres eastwards and settled in villages of the later so-called 'Pottland' with their good clay sources. In some villages in that area, pottery seems to have played an important part in the rural economy since the 12th century (König 2009, 149). Most of these villages are situated in areas that were rather less well-suited to agriculture. There were, however, natural resources like large forests, clay, and sand, all of which were necessary for the development of industries such as pottery and glass production (Figure 20.1).

Unfortunately, there have been few archaeological excavations in pottery villages such as Bengerode/Fredelsloh and Coppengrave. Occasional finds of pottery waste in connection with construction work, or from surveys of deserted sites show that there must once have been a larger number of production sites (Lönne 2004, Stephan 1981). These examinations, and excavations in Fredelsloh, Coppengrave and Bengerode, demonstrated the existence of a number of workshops producing large quantities of stoneware and earthenwares. Due to the quantity of pottery and the quality of the ware, as well as the kilns and state of technology, it can be assumed that a considerable number of the inhabitants of these villages were engaged in pottery as their primary profession. Evidence suggests that the number of villages engaged in these industries decreased significantly from the 14th and 15th centuries, when settlements became deserted all over the region. However, some villages (including Coppengrave, Duingen and Grossalmerode) persisted, and from the 16th century onwards, showed a renewed and substantial increase in pottery production. In addition to simple earthenwares (now mostly featuring an interior glaze) and stonewares, new wares were introduced: a range of highly decorated, painted and glazed earthenwares. In addition to the new shapes, like dishes and bowls, this pottery also introduced an innovation in its

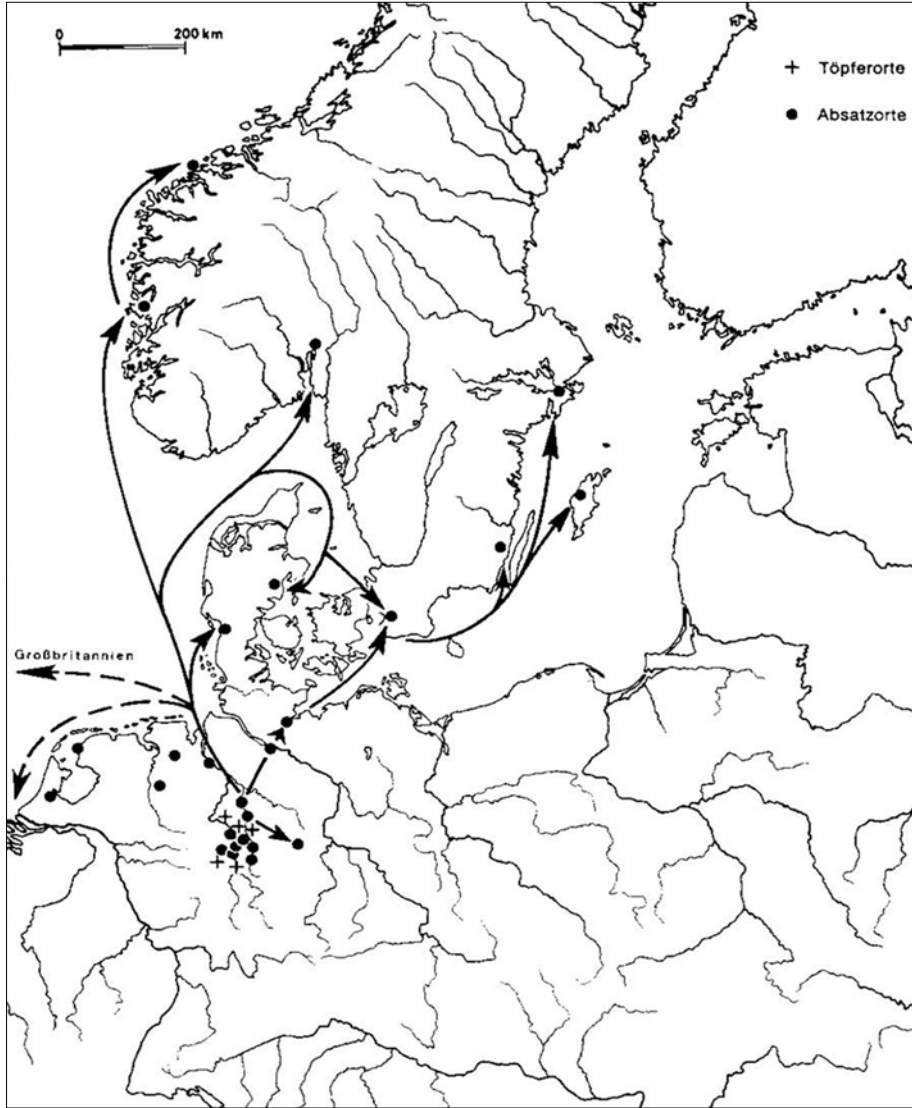


Figure 20.1: Map of northern and central Europe, showing some of the pottery production sites discussed in the text (marked by a cross), possible trade routes and find spots (marked by a dot) of the discussed pottery (from Stephan 1981, 87, fig. 34).

approach to colourful decoration. Thus it was not only functional, but also constituted a rather prestigious tableware. These wares were named *Weserware* and *Werraware* after the rivers near to their main production sites, and which acted as their main transport routes. The character of these wares – as a product largely produced for export – is thus indicated in the very terms used to refer to them in scholarly discourse (Figure 20.2).



Figure 20.2: Weserware bowl, found in Bergen, Strandgaten 55-57. Bright fabric and glaze, decoration in green and orange-brown. (Photo by V. Demuth).

Whereas the simply decorated Weserware was produced in the villages of the Pottland, largely identical with the centres of medieval stoneware production as mentioned above, the more elaborate Werraware was produced primarily in minor towns along or near the Werra. The most important production centres of Werra ware were the towns of Heiligenstadt, Witzzenhausen, Wanfried and Hannoversch-Münden. To a certain degree, though mainly at a later date, Werra ware was also produced in towns away from the Werra such as Höxter at the Weser (König 2007), and Großalmerode in the Hessian mountains (Stephan 1986).

Evidently the production of these distinctive new wares occurred in parallel, and together constituted an expression of the general upswing and cultural flowering of the so called 'Weserrenaissance'. In the late 16th century, the region along the rivers saw an increase in wealth that was expressed in (*inter alia*) elaborate architecture, portable material culture, art, and the emergence of a self-confident citizenship, which founded its wealth largely on craftsmanship and trade. This period came to a sudden end with the 30-years war (1618-1648). This tragedy reduced the population in the region by 30-50%, and left settlements and the economy in ruins. Unsurprisingly, pottery production seems also to have decreased and the production of elaborate Werraware came to an end. Nonetheless, some ceramic production persisted into the 19th century, and to some extent to the modern period, as seen in villages such as

Duingen, Coppengrave and Grossalmerode. Written evidence from this latest phase provides insight into how the production and trade of ceramics might have been organised in the medieval period.

Characteristics of the wares

The pottery that forms the material basis of this paper consists of two groups: Lower Saxon stoneware and highly decorated, painted slipware. The first is fine tableware of more or less fused stoneware. In the high temperature at which the pottery was fired, the elements of the clay ‘melted’ together, making the fabric completely watertight. Such stoneware is therefore excellently suited as a container or tableware for liquids. The majority of Lower Saxon stoneware is covered with a reddish or brown ferruginous wash, ‘which becomes fused and therefore impervious during firing’ (Gaimster 1997, 300). The Pottland region developed a distinct typology, with characteristics that are clearly different from stoneware produced in the Rhine area, the oldest and largest production area of stoneware in Europe. A typical and sure sign of Lower Saxon stoneware is a flat base, and rather fine thumbed finger impressions at the edge, resulting in a slightly frilled feet. In comparison, Rhenish stoneware is characterised by a rather thick, almost lentil-formed base and a robust thumbed feet, made by stronger finger impressions (Figure 20.3).

Rhenish stoneware generally has slightly thicker walls than the Lower Saxon material. The fabric of Lower Saxon stoneware is characterised by small, dark dots of melted ferrous particles that give rise to dark or reddish dots on the sintered surface. Rhenish material lacks these characteristics. The vessels made of Lower Saxon stoneware are mainly drinking and pouring vessels such as jars of different sizes, pitchers and beakers, though a number of special forms – including miniature vessels, zoomorphic aquamaniles and small toy figurines – are known. There are further typological details of chronological significance, but these go beyond of the scope of

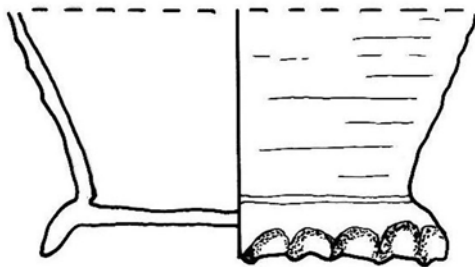


Figure 20.3: Basal fragment of a lower Saxon stoneware jug, found in Bergen in a late 14th-century context. Typical flat base with frilled feet, lightly thumbed. Diameter 10 cm. (Drawing by V. Demuth).

this paper. In broad terms, most of the Lower Saxon stoneware discussed in this paper was produced between the mid-13th century and the early-15th century. The youngest group of stoneware, which was largely produced in Duingen, dates to between the 16th and 18th centuries, and is dominated by storage vessels for liquids and food. However, in the late 16th and early 17th century, a range of elaborate, relief-decorated drinking vessels were also produced in Duingen.

The second important group of pottery to be discussed in this paper consists of

the early-modern slipwares known as *Weserware* and *Werraware*. *Weserware* is characterised by a light yellow or reddish-brown fabric that is decorated with painting in brown, red, orange, yellow and green. Occasionally the fabric was completely covered with a light slip and then decorated. The decoration is mostly geometric, but there are also a number of floral or zoomorphic motifs on the vessels. The decoration was painted on the unfired vessel before the it was given a clear lead glaze. The painting was undertaken with a 'Malhorn': a painting tool for liquid clay paint, which was originally made of the tip of a cow or goat horn, but was often later of ceramic material.

Forms produced in *Weserware* are dominated by plates and bowls of different sizes, but a considerable number of small, decorated, tripod-cooking pots were painted in the same manner. These cooking pots tend to show additional rolling-stamp decoration, which also occasionally appears on the hammer-headed rims of plates. *Werraware* output, on the other hand, consists almost exclusively of flat vessel forms such as plates and bowls of different sizes. Jars and pots occur occasionally, but are extremely rare. *Werraware* is characterised by a reddish fabric that is covered with two layers of slip: first a white one, than a red one, so that the surface is again reddish brown. This procedure is necessary for the application of the characteristic decoration of *Werraware*, using the 'Sgraffito' technique. This technique is found on slightly older Italian and French renaissance pottery that may have inspired the makers of *Werraware*. The central decoration is scratched through the red slip, making the underlying white slip visible. Thus, the motifs appear in white on a reddish or dark background. In addition to the main 'Sgraffito' decoration, vessels are also painted in geometric or floral patterns in white and green. *Werraware* vessels are fired twice, as this allows better results to be achieved when it comes to the advanced decoration. At first the scratched and painted vessels are biscuit-fired to fix the decoration. After this, the lead-glaze is applied and fired in the second glaze-fire. This technique makes it possible to decorate the pottery with detailed graphical pictures. Thus, the majority of *Werraware* is characterised by a rich iconography, including different anthropomorphic scenes, as well as diverse zoomorphic and (occasionally) floral motifs. This iconography clearly has parallels in contemporary art and literature. Obviously then, the makers of *Werraware* – some of whom painted their initials on the vessels – were educated and literate artisans. Quite often, the year of production is also painted on the vessels, making these vessels an excellent dating material.

Weser- and *Werraware* were both produced extensively between c. AD 1570 and 1630. After 1630, the production of both wares decreases rapidly, most probably due to the effects of the 30 years war. A small-scale production of *Werraware* is recognisable in some places in the 1630s and '40s (König 2007), but none is known from the second half of the 17th century or later, and some of the production places seem to have switched over to other types of pottery. The less advanced *Weserware* however, was still produced on a minor scale in the late 17th and early 18th century, showing a characteristic change in decoration.

Who were the potters?

A range of social groups can be distinguished when enquiring as to who produced the material under discussion. For the more elaborate Werraware, some master potters may be personally identified through written sources. One such individual may be Hans Feupell, originally from Heiligenstadt (possibly the oldest centre of Werraware production), who is named as a citizen of the city of Witzzenhausen, where he had a workshop that produced pottery between 1599 and 1621 (Stephan 1990, 596). His house and workshop were situated on the waterfront of the river Werra. Thus the term 'Werraware' seems to fit quite well as the production of this ware obviously took place very close to the river Werra.

During rescue excavations in the 1980s a vast amount of pottery waste was found, providing a detailed insight into a major Werraware workshop. Stylistic variation led to the conclusion that several artists were involved in executing the decoration of pottery. It is likely that master Feupell was the head of quite a large and structured workshop, with distinctly segregated work processes. The various stages of production, such as digging and processing clay, forming vessels on the wheel, decoration, and finally firing, were probably carried out by different skilled individuals. The master potter in such a workshop was probably primarily engaged in the organisation, initial layout and design of the main decorative motifs, which often had direct predecessors in contemporary graphic art. This shows that the master potters of Werraware were well-educated artisans. The remainder of the production chain was probably composed of the kinds of individuals we might normally expect in a traditional handicraft workshop. Thus, there were the 'Lehrjungen' (apprentices), who were still undergoing training, and who would have been primarily occupied with the more simple tasks, and the 'Gesellen' and 'Altgesellen' (companions or journeymen; workers already fully-trained, but with different degrees of experience). The Gesellen and Altgesellen most likely undertook the forming, decoration, and firing of vessels. The master potter may have overseen the various stages of production, and undertook quality-control checks after the first firing. The enormous quantity of once-fired wasters indicates the operation of quite a strict quality-control process, as even pieces with apparently minor faults were discarded. Thus, it is clear that the producers of Werraware were quite aware that they were producing 'high-end' ceramics that were probably greatly valued by their consumers. Perhaps the potters disposed of all the wasters in order to avoid lower prices for pottery of inferior quality that in the long run may have reduced the value of the high-quality products.

As opposed to Werraware, Weserware was not produced in towns, but rather in the rural milieu of villages in the hilly 'Pottland' on the Eastern banks of the Weser. Unfortunately, no large or comprehensive workshop excavations have yet been carried out. There are, however, numerous finds of wasters, and more occasionally excavations of kilns. Additionally, a number of written and ethnographic sources relate details about the potters in this area, as ceramics was the core of the economy for large parts of the population in many of these villages, right up to the 20th

century. It may be assumed that the organisation of production in the 16th and 17th century was similar to that recorded in later periods. The potteries were traditionally workshops or minor handicrafts, often family-owned and -run. Tax rolls from 1585 list 34 potteries in Völksen, 14 in Altenhagen and 10 in Bad Münder. All in all, it is estimated that Weserware was produced by about 70–90 workshops in several villages of the 'Pottland' (Stephan 1992, 56). The important pottery village of Duingen, which was a major production site of early modern stoneware, was also nearby.

The situation for late-medieval stoneware is even more diffuse, as written sources are completely lacking for the medieval period. However, it is clear that medieval Lower-Saxon stoneware was produced in villages, many of them abandoned in the late Middle Ages. A number of such villages are known, but the most important and best known are probably Coppengrave and Bengerode. While Coppengrave still persists today (albeit with some displacement of the settlement area), Bengerode was abandoned in the 14th century, whereupon its inhabitants and potters moved to the nearby Fredelsloh. Fredelsloh is still today a 'pottery village' with a considerable number of ceramic workshops still in operation. At least one of these still uses the same clay sources exploited in the 13th century. Some of the clay pits have been discovered in the forests, while kilns and numerous wasters are known both from the abandoned Bengerode and from Fredelsloh. From what we know, we can assume that these rural workshops were organised along lines similar to those that governed the smaller, family-based handicrafts reported from early modern times.

Both clay and the firewood needed to run the kilns were crucial resources in the production of pottery. It is likely that such resources were often easily accessible in the 'pottery villages', but written sources make it clear that from the 16th century onwards, when large areas of Germany were deforested, firewood became a rare resource, especially in the towns. In 1584, when about 21 potters produced Werraware in Heiligenstadt, other citizens of the town complained about the shortage of firewood due to the large use of this resource by the potters (Stephan 1990, 593). Struggles over this crucial resource may have been one of the main reasons for a large number of potters from Heiligenstadt moving to towns on the Werra, where they continued to produce the characteristic, highly decorated earthenware that modern research has termed 'Werraware'.

How was pottery traded, and who may have participated in this trade?

In the absence of written sources, it is often difficult to investigate the means by which pottery was traded. Thus, it is correspondingly easier to draw conclusions about the trade in the wares discussed above for the early-modern period, but of course some of the characteristics of this trade may also have applied to the much less well-known medieval trade. It may serve us to start from first principles. It is a characteristic of pottery that it is relatively heavy and easy to break. Thus, certain precautions need to be taken in order to ensure safe transport. The most efficient means of transport

for pottery is undoubtedly by ship. Hence, the rivers Weser- and Werra were the most important routes for the distribution of the material discussed in this paper. Again from the above-quoted source from the town of Heiligenstadt (dated 1595), we know that the majority of the Werraware produced went directly to Dutch traders who exported ceramics via waterways to the Netherlands (Stephan 1990). Werraware in particular seems to have been extremely popular in the Netherlands, and it is possible that these Dutch traders had special arrangements with the potters for the delivery of this material. The popularity of Werraware in the Netherlands was such that it actually led to the establishment of a Werraware workshop in Enckhuizen, the Netherlands. Between 1602 and 1612 this workshop, set up by the tradesman Dirck Claes Spiegel, produced perfect copies of Werraware (Bruijn 1992). However, Werraware was not exclusively distributed to the Netherlands. It is, of course, quite common in the region around the production sites, and is also commonly found in trading places along the North Sea. It is found as far afield as North America (Stephan 1993, 307), but it is unclear to what extent these rather singular finds of Werraware constitute traces of regular trade, rather than simply being personal belongings or gifts that have travelled by diverse mechanisms (Stephan 1993, 307).

Weserware's distribution pattern is similar to that of Werraware, though it seems to be even more widespread, being more often found in the inland areas of northern Germany, as well as in many places in Scandinavia and along the coasts of the Baltic Sea. There are no written sources about trade involving Weserware, but Weserware or a similar slipware may have been amongst the '5 chests with plates and bowls' that are mentioned as imports to Nya Lödöse, western Sweden in 1586 (Strömbom 1923, 276). This quotation from a tax-roll gives an idea of how pottery was packed for transport. However, once it had left its workshops, the first step for Weserware had to be overland, as the potter-villages all lie some distance away from the river Weser. Carts were probably used for the transport to riverside towns such as Hameln, where considerable amounts of Weserware were found, and where local citizens were often engaged in river trade. Some of these traders from the early 17th century are in fact known by name (Grohmann, 2012, 178). A number of written sources evidence the trade with pottery down the river Weser in the 16th and 17th century (Grohmann, 2012, 177 f.). For the river boats that carried this cargo, pottery was usually their only type of freight, which may indicate that the trading of pottery was a specialised routine. Yet, it is known from 18th-century written sources that a number of potter families from the 'Pottland' travelled long distances overland in summer, in order to sell their products. Additionally, the small-scale pottery trader is a well-known phenomenon in the ethnographic and written sources of northern Germany. These were actors who carried individual loads of pottery on their backs, with the intention of selling from house to house. Contemporary prints from the 16th and 18th centuries show both women and men performing this trade (Figure 20.4).

There are clear indications that Werraware was sold on the market at Bergen, Norway. Amongst material recovered through rescue excavations on Vågsalmenningen

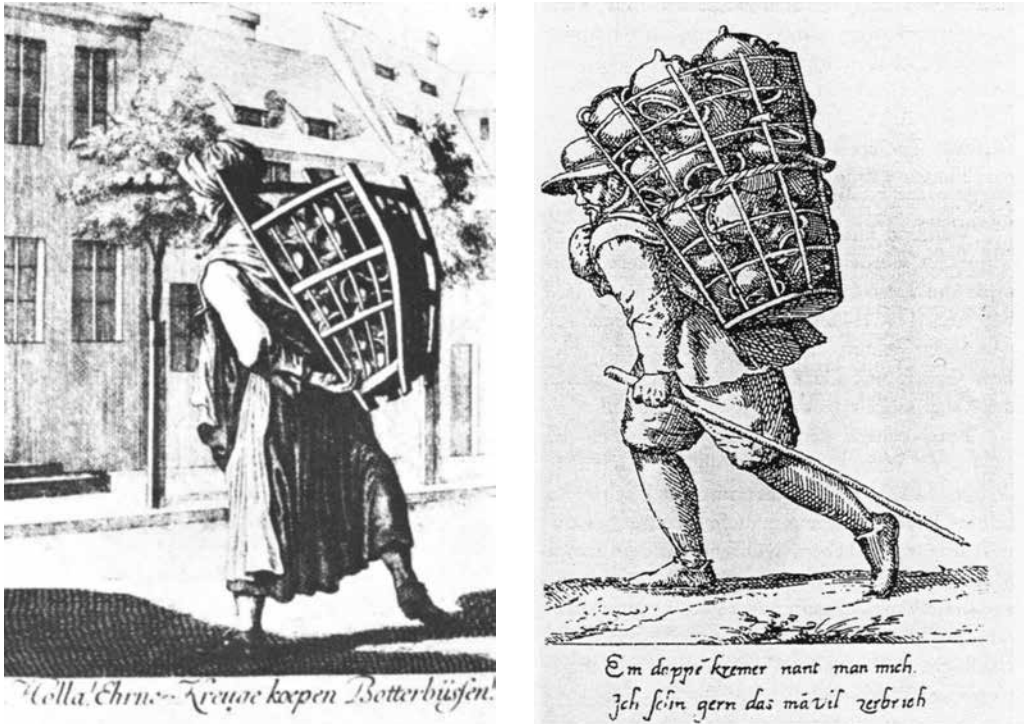


Figure 20.4: Contemporary prints from the 18th (left) and 16th (right) century, showing traders with pottery in southern lower Saxony. (From Stephan 1981, Pl. 79.1; Stephan 1992, 120, fig. 183).

(Åstveit 1998), near to the central marketplace of the city, several fragments of Werraware vessels bear clear signs that they had been exposed to heat. The context of the finds – in a stratigraphic layer from a fire that devastated this part of the town in the early 17th century – indicates that they were burnt in a destructive fire at this place. This material augments existing finds from the same spot: A fragment from a stack of at least four Werraware plates – sintered together by the heat of fire – had been found in 1915 (Demuth 2001, 85, fig. 8). Obviously these plates were not displayed on a board, as was usual in early-modern households, but were instead stacked. Thus, it is highly probable that Werraware was stockpiled in large quantities here, as one would expect in shop storage. As we know from written sources, many of the craftsmen in this area of the town were also engaged in the small-scale trade of a variety of products. It seems highly probable that pottery – particularly semi-luxurious products such as Werraware – belonged to these traded goods. The remains of the Werraware stack may thus be interpreted as the physical evidence of a Werraware retail trade in Bergen. The ceramics may have come from the continent to Bergen by various means. As all wares shipped on the river Weser had to be displayed or presented for sale in the city of Bremen before being transferred for maritime trade,

all pottery shipped on the Weser must have been easily accessible at the marketplace and port here. In the 16th and 17th centuries, Bremen had strong connections with Bergen, and ships from the former frequently visited the latter for trade (Schreiner 1963). Pottery was probably comparatively cheap when bought in Bremen, though it had acquired considerable value by the time it was sold in Bergen. As ships travelling from the continent to Norway carried substantial loads of ballast, it seems that there was sufficient space aboard to carry heavy goods such as pottery.

Another possible means of exchange was the small-scale trade undertaken by sailors. Written sources make it clear that each sailor on a Hanseatic ship had the right to transport a certain quantity of goods for sale on his own behalf in the harbours visited (Brück 1993). 18th-century documents record complaints by Norwegian merchants about 'loose sellers' on the streets and market in the small town of Molde, north of Bergen. These 'loose sellers' may be, at least in part, identified as our 'selling sailors' (Sanden 1988, 13). Nonetheless, there are also indications that pottery was exchanged by specialized ceramic tradesmen.

One example is a trader from Bergen op Zoom in the Netherlands, who is named in early-16th-century written sources as a 'kanneman'. During archaeological investigations, large quantities of Rhenish stoneware, obviously intended to be trading goods, were found in the remains of his dwelling Groeneweg, and Vandenbulcke, 1988). Similarly, in the 18th century, a tradesman with a large stock of pottery is named in Minden, on the river Weser (Lehnemann 1981, 11). Based on this evidence, the results of an excavation in Strandgate 55–57 (Dunlop 1993) can be interpreted as just such a warehouse for imported pottery. In the remains of a trading building on the waterfront, enormous quantities of ceramics were found, all dating from between the late 16th and the mid-17th century. As the buildings in this part of town are known from written sources to have had a mercantile function, and the finds consisted of an unusually large quantity of pottery from diverse regions, the presence of a pottery store seems most plausible. Werra- and Weserware make up the majority of decorated pottery in this material. Other decorated wares are stoneware (mainly from Siegburg), slipwares of different origins, and some exotic decorated pottery. However, the largest quantity of ceramics belongs to simple kitchen pottery (Demuth 2001, 118). Thus, it can be suggested that a considerable quantity of the pottery in 16th- and 17th-century Bergen was traded via large stores like the one in Strandgaten. Most probably, these magazines were owned by merchants partially specialized in pottery trade.

Compared to the early-modern material, the trade in medieval Lower Saxon stoneware is much more difficult to trace. One of the best pieces of archaeological evidence for this trade is a large quantity of Lower Saxon stoneware jugs that were part of the freight of a medieval ship that sank or perished near to Nauvo on the coast of Finland (Tevali 2010, Wessman 2007). These recent finds are still being examined by Finnish marine archaeologists, but may provide important information about the Hanseatic trade in late-medieval stoneware. Dendrochronological analysis of the

ship's timbers will provide valuable information concerning the precise dating of these late-13th-century stoneware types.

It can be concluded that a number of different types of actors were involved in the trade of pottery. There is evidence for specialized traders dealing with ceramics in bulk, and controlling trade all the way from producer to consumer. However, it is also highly probable that there were complex trade-networks, in which diverse actors were engaged in the different stages of exchange. These networks would have incorporated small-scale trade: both of individuals for whom the pottery trade provided their main source of income, and of other professionals – such as our craftsmen or sailors – who traded in pottery as an additional revenue stream.

What purpose did the traded pottery fulfil?

Judging by their form and character, the types of pottery discussed herein were intended to be used for a wide range of purposes. Of course, most objects may be used for something other than their original intended purpose, but the main function of the vessels should be considered as the most important aspect of their use. When asking why the pottery was traded, we should not forget that the key rationale for all trade in the late medieval and early modern periods was, as today, the desire for profit and economic advantage. Thus, there are different layers of meaning in our objects: their function as objects of practical use, their function as markers of specific habits, and their function as objects of trade that could be sold for profit.

The main forms of ceramics dealt with in this paper are tableware, and thus were meant to fulfil certain functions at the table. The jugs, pitchers and beakers of late-medieval Lower Saxon stoneware were clearly intended to serve the beverages stored in a larger container, such as a barrel. The function of the larger jugs was to pour such beverages into smaller, drinking vessels. Taking medieval drinking habits into consideration, it is highly probable that these beverages were beer or (perhaps) wine rather than water, juice or milk (Bäumker 1987, 100). Water in most medieval towns was of rather poor quality (Hoffmann 2000, 21) and fresh milk and fruit juice were probably not easily available in an urban context. Generally beer and wine seem to have been the most frequently consumed beverages in the European towns of the late Middle Ages (Helle 1982, 318; Irsigler 1996; Laurioux 1992, 84). Thus stoneware drinking and pouring vessels were most likely used for the consumption of alcoholic beverages, although these functions could also be fulfilled by vessels of organic material that would have been available locally. It can thus be suggested that the use of imported ceramics may have had a certain meaning for the users, something that went beyond pure functionality. It is possible to imagine imported pottery in distinct styles finding value as a marker of a certain table culture influenced by foreign habits (Figure 20.5).

Moreover, imported stoneware vessels may have functioned as 'branding marks' for highly valued imported beverages such as beer and wine. In this

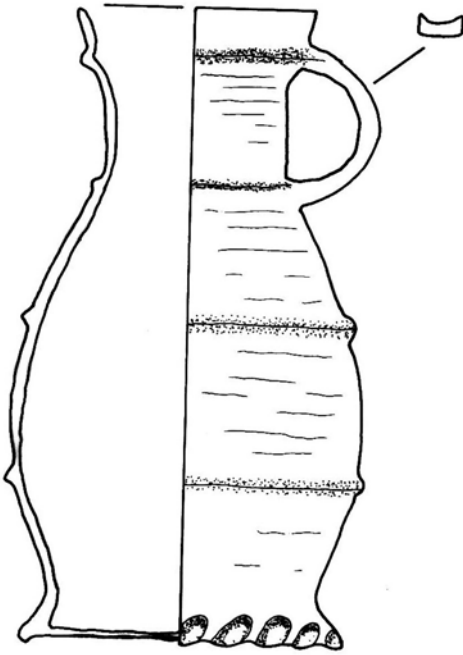


Figure 20.5: Typical small jug from Bengerode, found in Bergen, Bryggen. c. 17 cm high. Produced around 1300. Brown slip. (Drawing by V. Demuth).

context, it is noteworthy that Lower Saxon stoneware comes from a region that is known from written sources to have been an important region for the export of strong, high-quality beer. For instance, the small Hanse town of Einbeck, situated in close proximity to the 'Pottland', held importance as a centre of production for beer bound for long-distance trade (Heege 2002, 41). Moreover, there are frequent written sources concerning the import of beer from northern Germany to Bergen (Helle 1982, 318). The characteristic stoneware may have functioned as an indication that the beverage served was 'real' imported beer. A similar and very convincing interpretation was given by French archaeologists Deroeux and Dufournier for the French Saintongue ware that most probably has to be seen in connection with the wine trade from south-western France (Deroeux *et al.* 1994). Finds of Lower Saxon stoneware on shipwrecks – such as the recent

discovery of Nauvo in Finland, in which a large quantity of this pottery made up part of the cargo – may thus be interpreted in a way that sees a certain number of vessels accompanying the beer barrels, in order to give the consumer a kind of guarantee that he would be served a particular type of beverage. Yet it is also possible that the pottery was an independent part of the cargo, traded as a valuable household article.

The Werra- and Weserware are completely different types of material, and must have had correspondingly different functions. As mentioned above, the majority of Weser- and Werraware finds are plates and bowls, probably meant to be used as serving dishes for food at the table. This is probably also the case for the small, decorated, tripod-cooking pots of the Weserware. These can most likely be interpreted as specialised kitchen instruments, used to cook and serve certain 'hotpot'-like dishes. Generally, the 16th- and 17th-century florescence of plates and bowls as tableware indicates the appearance of a table culture with an increased variety of dishes (Gaimster 1986, 31). It also shows that through the use of such pottery, a representative table culture was accessible to a broad demographic. Contemporary pictures show that, when not in use on the table, plates and bowls were stored and displayed on

boards or hanging at the wall. This would also be an aesthetically pleasing way in which to display highly decorated slipware when not in use. All in all, the use of such highly decorated objects is in accordance with the general everyday practice of the early-modern period, characterised as it was by the extensive use of decoration across many forms of material culture.

More particularly, the elaborate figurative decorations that characterise some of the pottery probably had highly specific symbolic meanings. Thus, the pottery was an important medium for a largely illiterate population. The ornament does express a number of profane and spiritual subjects. There are strong indications that painted slipware items were exchanged as gifts in marriage ceremonies, and the giving of pottery with particular ornament may well have expressed good wishes for the couple (Demuth 2001, 124). It may be supposed that highly decorated earthenware may have also been used on occasion as a symbolically loaded gift (Bartels 1986, 45; Hoffmann-Klerkx, 1992, 162). Historical, literary, and pictorial sources provide a starting point for the interpretation of the most common symbols used on the pottery, such that the painted slipware allows us an insight into the mentality of both producers and users in the early modern period.

Where in Bergen was the pottery used, and by whom?

The pottery discussed in this paper was found in several socio-geographic zones of the city of Bergen. On the basis of written sources, it can be estimated that the different areas of the town are likely to have been populated by people of quite diverse wealth and social status (Fossen 1979, 302). It is also important to note that the population of medieval Bergen was of a varied ethnic background. The majority of the inhabitants were native Norwegians (both newcomers from the rural areas and 'indigenous' townspeople). Another very large social group had their origin in the towns of the northern German Hanseatic league. This group formed as much as 25% of Bergen's population, and consisted both of people working temporarily in the mercantile centre of the Hanseatic Kontor, and of more permanently settled German craftsmen in the town centre. In addition to these German migrants, Bergen was also host to a considerable number of citizens of Danish, Dutch and British origin (Fossen 1979, 234). As a result, one issue when analysing Bergen's collection of imported pottery is whether these imported ceramics were used by migrants or by the population in general, regardless of their origin. Furthermore, it would be interesting to assess whether the distribution of the archaeological finds is indicative of distinct social groups using particular types of ceramics.

As a result of Bergen's history of urban archaeology, a large quantity of material has been excavated from the area of *Bryggen*, the locality at which the Hanseatic Kontor was situated. It can be assumed that most of the material found there was used by the Hanseatic citizens working in Bergen for a period. For them, using pottery from their homeland might have constituted a method of countering homesickness,

especially when filled with the appropriate beverages such as imported northern German beer. It might equally have been a way of subtly expressing ethnicity or cultural identity, or of creating a group identity with fellow expatriates. All types of stoneware drinking and pouring vessels, as well as the decorated tablewares of Weser- and Werra-ware occur frequently at Bryggen. As the area was also the mercantile centre of the town, it is possible that this material was at least partially meant as a trading good. However, the written sources provide no indications that trade in goods such as pottery was performed to any significant extent at Bryggen, where most business was in the movement and exchange of bulky commodities such as the trade of Norwegian fish for Baltic grain. Thus, it seems most likely that the majority of the pottery found at Bryggen was used by the men of Hanseatic origin who lived and worked there (and who may have numbered up to 2000 people; Helle 1982, 743). The stratigraphic context of the Bryggen pottery supports the interpretation that it represents domestic debris rather than discarded trade goods, and it does seem that Bergen's 'Hanseatic' population tended to follow a lifestyle that was as similar to the experience of their hometowns as possible.

Another important findspot for our ceramics is Bergen's old wine cellar. This was the only wine-selling tavern in town, and was an important meeting point for the various elements of the town's population (particularly its Norwegian and Hanseatic citizens). In the wine cellar the different types of jugs and beakers may very well have functioned as markers for the various beverages served here. Unsurprisingly, fragmented drinking and pouring vessels in stoneware of various origin were the most frequent finds in the wine cellar, accompanied by a range of remains of drinking glasses. The number of different forms, not only of the dominating Siegburg stoneware, but also of the quite frequently encountered Lower Saxon stoneware vessels, indicates the existence of an elaborate table culture in the tavern. Thus, the site may have operated as an important gateway, through which Hanseatic table culture was transferred to the broader town population. From the 14th century the wine cellar was also closely connected to Bergen's oldest town hall, and parts of the building complex served as an administrative centre for the Hanseatic Kontor from around the same date. This suggests that visitors to the wine cellar belonged predominantly to the higher echelons of society.

However, Lower Saxon stoneware, as well as Werra- and Weserware are also found in more peripheral areas of Bergen which, according to written sources, were the dwelling areas of the less privileged members of the community. Unfortunately, only small-scale excavations have been undertaken in these areas, and the quantity of recorded pottery is correspondingly small. Nonetheless, the finds show that both late-medieval Lower Saxon stoneware and early-modern Weserware made up part of the household inventory in these areas. In short, it is clear that the pottery discussed in this paper was used by the less wealthy inhabitants of the town, as well as by the elite. In at least one case, there are strong indications that the inhabitants of a house in which imported pottery was found were ethnic Norwegians (Hansen 1995, chart

5 and 6). Amongst the finds are fragments of fishing equipment that were probably exclusively used by Norwegians. This indicates that in the town of Bergen, the native population had adopted elements of table culture and consumption manners from the Hanseatic world. Yet, the appearance of other finds, such as fragments of a bone flute and a chess piece, give the impression that the inhabitants of this house were generally concerned with the cultivation of a sophisticated lifestyle (Hansen 1995, 33–34).

The distribution of our distinct forms of pottery shows one particularly striking characteristic: in Bergen, decorated tripod-pipkins in Weserware are found exclusively in the Hanseatic quarters. As mentioned above, these cooking pots may have been primarily used for the preparation of certain meat-dishes that were a festive speciality in Northern Germany ('Grapenbraten'). One interpretation of their distribution is that these pots were used exclusively by ethnic German inhabitants of Bergen, who prepared food in the manner they remembered from home. That these pots have not hitherto been found in a 'non-Hanseatic' context may indicate that this way of cooking and serving of food was not adopted by townspeople of other ethnic backgrounds.

What mental or social aspects of life may be represented by the pottery or its use?

The patterning in the pottery finds discussed in this paper may indicate that the users of such vessels in Bergen participated in consumption habits and table culture that were common across large areas of northern and central Europe. The fact that the Hanseatic League was a dominant economic and political actor in this region during the late medieval and early modern period may justify our speaking of a 'Hanseatic culture'. Indeed, the Hanseatic trading network not only provided access to basic commodities such as grain, but also to more elaborate and luxurious goods. Judging from the quantities traded and the status and cost of the material in the regions of production, pottery was not primarily an item of luxury merchandise, but it was nonetheless a non-essential, and almost a 'lifestyle' product. We have seen that stoneware jugs and beakers were primarily intended for the consumption of alcoholic beverages, and it seems that the drinking of alcohol in certain vessel forms carried a certain significance for the people of late-medieval and early-modern Bergen. This practice was clearly a common characteristic across what may be termed the 'Hanseatic world', and is reflected in written sources that document the large scale of the trade in both beer and wine. It is important to keep in mind that drinking might not only have fulfilled the physical need for liquid (or the urge for inebriation), but might have also been part of a cultural process, wherein the use of appropriate drinking vessels may have been socially significant. Thus, the stoneware vessels discussed here may be interpreted as physical evidence for the geographical expansion of a specific 'Hanseatic' drinking culture.



Figure 20.6: Werraware bowl found in Bergen, showing a bird and the inscription '1597'. Diameter: c. 16 cm. (Drawing by V. Demuth).

The decorated Weser and Werra slipware may similarly be interpreted in terms of consumption and table culture (Figure 20.6). We know that flat vessel forms become more frequent in northern and central Europe from the 16th century onwards. This increased use of plates and bowls is a clear indication of the introduction of a richer cuisine with a larger variety of dishes, all of which were delicately presented on the decorated pottery. This in turn may be seen as a sign of the increased wealth and self-confidence of the common citizens, as well as an indication of awareness and appreciation of food, decoration and 'lust for life' in general. In this sense, the highly decorated earthenwares can be seen as phenomena of a time in which colourful expressions became frequent and accessible to a broader spectrum of the population.

The iconography of Weser- and Werraware

The motifs found on painted slipware may be seen as direct expressions of contemporary mentality and worldview. In a time of rather limited literacy, pictures and symbols on widespread materials such as pottery must have played an important role as media. Thus, the decorated earthenware provides a deep insight into the minds of the producers and consumers. The decorated vessels themselves may have helped to convey the meanings that were expressed with the symbolic motifs. It is likely that these symbols were understood in both production and consumption areas, such that the vessels were able to function as media for the meanings of the symbols. As was mentioned above, the symbolism of Weser- and Werraware incorporates a large number of quite disparate motifs. The more detailed figurative decoration on Werraware quite often depicts scenes from biblical stories, highlighting the importance of the religion and spirituality that formed the ideological background of the 16th and 17th century. The stories behind the scenes were probably familiar to the receiver. Images of messengers from the Promised Land, in some cases represented by a single grape, are also quite common, and are frequently found in Bergen. It seems clear that for the recipients, the imagination of wealth and fertility was a most desirable part of this biblical teaching. Another common motif on both Weser- and Werraware is the sun, which is depicted in various personified renderings

on Werraware, and in different symbolic and stylised versions on Weserware. The sun is also a powerful symbol, and even though its precise meaning may be debated, it seems most likely that it represents life and health. Also images of birds are frequently found on both Weser- and Werraware. There are strong indications that the bird symbol had sexual connotations in 16th- and 17th-century iconography (Demuth 2001, 125; van Gangelen 2000, 157; de Jongh 1968/69). This meaning would probably fit well with the use of plates and bowls as wedding gifts, as outlined above. In all, the highly decorated earthenware seems to point towards a mentality that was largely dedicated to earthly pleasures. Both the medieval stoneware and the early-modern earthenware then were a direct expression of the users' 'lifestyle', which seems to have shared many common elements across large areas of the Hanseatic trading network.

Conclusion

In this paper, I have attempted to show how pottery finds from the Hanseatic inland may give us an insight into the everyday lives and interregional interactions of people in three broad locales: Bergen as a place where the material was used, the regions in which pottery was produced and the areas along the transportation route. Various actors were engaged in production, trade, transport and use of these objects, yet they did not all leave such distinct marks in the archaeological material as did the potters, who in some cases literally left their fingerprints and handwriting on the vessels. Pottery is not only the most frequently recovered bulk find-material from late-medieval and early-modern archaeological excavations, but, as has been shown herein, it can also be used as a unique source for research into the actors and networks of the past.

References

- Åstveit, J. 1998. Arkeologisk forundersøkelse på Nedre Korskirkeallmenning/Vågsallmenning, Vågsbunnen i Bergen, 1998. Unpublished excavation report, Norsk Institutt for Kulturminneforskning (NIKU), Topografisk arkiv University Museum of Bergen, Bergen.
- Bartels, M. 1988. Bildmotive und Motivwanderungen auf ritzverzierter Irdenware. In Naumann, J. (ed.) *Keramik vom Niederrhein*, 269–372. Hetjens-Museum/Deutsches Keramik-Museum, Köln.
- Bäumker, U. 1987. Essen und Trinken in nordwestdeutschen Städten des Spätmittelalters. In Trier B. (ed.) *Ausgrabungen in Minden*, 91–104. Westfälisches Museum für Archäologie, Münster.
- Blackmore, L. and Vince, A. 1994. Medieval pottery from south-east England found in the Bryggen excavation 1955–68, 9–160. In Herteig, A. (ed.) *The Bryggen Papers, Supplementary Series*, Vol. 5, Scandinavian University Press, Bergen.
- Bruijn, A. 1992. *Spiegelbeelden*. Stichting Promotie Archeologie, Zwolle.
- Brück, T. 1993. Der Eigenhandel hansischer Seeleute vom 15. bis 17. Jahrhundert, *Hansische Geschichtsblätter* 111, 25–41.
- Deroeux, D., Dufournier, D. and Herteig, A. E. 1994. French medieval ceramics from the Bryggen excavations in Bergen Norway, 161–208. In Herteig, A. (ed.) *The Bryggen Papers, Supplementary Series*, Vol. 5, Scandinavian University Press, Bergen.

- Dunlop, A. R. 1993. Report on the excavations at BRM236 Strandgaten 55–57, 1986. Unpublished report, Riksantikvaren Utgravningskontoret for Bergen, Rapport 1986. Bergen.
- Fossen, A. B. 1979. *Bergen Bys Historie. Borgerskapets by. 1536–1800*. Alma mater forlag, Bergen.
- van Gangelen, H. 2000. Stomme beelden ende nochtans sprekende. Kicken, D., Koldewey, A. M. and ter Molen, J. R. (eds): *Gevonden voorwerpen/Lost and found*. Rotterdam papers 11. 152 – 162. BOOR, Rotterdam.
- Gaimster, D. R. M. 1986. Die neuzeitliche Keramik (c. 1550–1900) am unteren Niederrhein nach den Funden aus Duisburg. In Krause, G. (ed.) *Volkstümliche Keramik vom Niederrhein, Katalog zur Ausstellung*, 29–44. Niederrheinischen Museums der Stadt Duisburg, Duisburg.
- Gaimster, D. R. M. 1997. *German Stoneware. Archaeology and Cultural History*. British Museum Press, London.
- Groeneweg, G and Vandenbulcke, V., 1988. The stoneware stock of Jan-Peterss and Cornelis de Kannemann: Two merchants of rhenish pottery at Bergen op Zoom (NL) during the 2nd quarter of the 16th century. In Gaimster, D. R. M., Redknap, M. and Wegener, H.-H. (eds). *Zur Keramik des Mittelalters und der beginnenden Neuzeit im Rheinland*, 343–357. British Archaeological Reports International Series 440, Oxford.
- Grohmann, M. and O. 2012. Zum Absatz und Handel mit Töpferwaren aus dem Pottland. In Leiber, C. (ed.) *Aus dem Pottland in die Welt. Eine historische Töpferregion zwischen Weser und Leine*, 177–180, Verlag Jörg Mitzkat, Holzminden.
- Hansen, G. 1995. *Lille Övregaten friområde BRM 465*, Riksantikvaren Utgravningskontoret for Bergen, Rapport 1994. Unpublished report, Topografisk arkiv University Museum of Bergen, Bergen.
- Heege, A. 2002. *Einbeck im Mittelalter*. Isensee, Oldenburg.
- Helle, K. 1982. *Bergen bys historie. Kongssete og kjøpstad. Fra opphavet til 1536, Bind I*. Alma Mater forlag, Bergen.
- Hoffmann, A. 2000. Wassernöte und technischer Wandel in der frühen Neuzeit, Frontinus Gesellschaft (ed.). *Die Wasserversorgung in der Renaissancezeit*, 11 – 49. Verlag Philipp von Zabern, Mainz am Rhein.
- Hoffmann-Klerckx, E. 1992. Die Kleidung auf der Keramik von Enkhuizen, In Bruijn, A. (ed.) *Spiegelbeelden*. 141–163, Stichtig Promotie Archeologie, Zwolle.
- König, A. 2007. Werraaware-Produktion in Höxter an der Weser? In Bucur, C. I. (ed.) *Keramische Oberflächen und ihre Gestaltung. Beiträge zum 39. Internationalen Hafneresymposium des Arbeitskreises für Keramikforschung*, 17–23. Nationaler Museumscomplex „ASTRA“/Consiliul Judetean Sibiu, Sibiu (RO).
- König, S. 2009. *Die Stadtwüstung Nienover im Solling. Studien zur Sachkultur einer hochmittelalterlichen Gründungsstadt im südlichen Niedersachsen*. Materialhefte zur Ur- und Frühgeschichte Niedersachsens Band 39, Verlag Maria Leidorf, Rahden /Westfalen.
- Irsigler, F. 1996. 'Ind machen alle lant beirs voll'. Zur Diffusion des Hopfenbierkonsums im westlichen Hanseraum. In Ruth, E. Mohrmann and Günter Wiegelmann (eds) *Nahrung und Tischkultur im Hanseraum. Beiträge zur Volkskultur in Nordwestdeutschland, Band 91*. 377 –398. Waxmann, Münster.
- Laurioux, B. 1992. *Tafelfreuden im Mittelalter. Kulturgeschichte des Essens und Trinkens in Bildern und Dokumenten*. Belsar Verlag, Stuttgart und Zürich.
- Lehmann, W. 1981. Weserkeramik- Keramik auf der Weser. In Mielke, H.-P. (ed.) *Keramik an Weser, Werra und Fulda*. 1981, 9–12. Uhle & Kleimann, Lübbecke.
- Lönne, P. 2004. Die mittelalterliche Töpfereiwüstung Bengerode bei Fredelsloh, Ldkr Northeim. In Both, F., Haßmann, H. and Fansa, M. (eds) *Archäologie Land Niedersachsen. 25 Jahre Denkmalschutzgesetz. 400000 Jahre Geschichte*, Archäologische Mitteilungen aus Nordwestdeutschland, Beiheft 42, 264–265. Theiss, Oldenburg.
- Lüdtke, H. 1989. *The Bryggen Pottery I, Introduction and Pingsdorf Ware*. The Bryggen Papers Supplementary Series No.4, Norwegian University Press, Bergen.
- Sanden, J. 1988. Vraket fra stolpeleia, *Spor - fortidsnytt fra Midt-Norge*, Nr. 2; 12–14.

- Schreiner, J. 1963. Bremerne i Bergen, *Historisk Tidskrift Bind 42*, 291–315.
- Stephan, H.-G. 1981. *Coppengrave - Studien zur Töpferei des 13. bis 19. Jahrhunderts in Nordwestdeutschland*. August Lax, Hildesheim.
- Stephan, H.-G. 1986. *Großalmerode. Ein Zentrum der Herstellung von technischer Keramik, Steinzeug und Irdenware in Hessen. Die Geschichte der keramischen Gewerbe und die Entwicklung ihrer Produktion vom 12. bis zum 19. Jahrhundert. Teil I*. Geschichtsverein Großalmerode, Großalmerode.
- Stephan, H.-G. 1988. Steinzeug und Irdenware. Diskussionsbeiträge zur Abgrenzung und Definition des mittelalterlichen deutschen Steinzeuges. In Gaimster, D. R. M., Redknap, M. and Wegener, H.-H. (eds) *Zur Keramik des Mittelalters und der beginnenden Neuzeit im Rheinlan*, 81–117. British Archaeological Reports International Series 440, Oxford.
- Stephan, H.-G. 1990/1991. Heiligenstadt als Herstellungszentrum reich verzierter Keramik der Renaissance. *Die Kunde N.F. 41/42*, 575–601.
- Stephan, H.-G. 1992. *Keramik der Renaissance im Oberweserraum und an der unteren Werra*. Beiheft zur Zeitschrift für Archäologie des Mittelalters Nr. 7. Köln.
- Stephan, H.-G. 1993. Zur Verbreitung von Werra- und Weserware der Renaissance in Europa und der neuen Welt. Überlegungen zur Interpretation archäologischer Fundkarten und zum Nachweis von Handel sowie anderen Formen der Mobilität von Gebrauchsgut. In Gläser, M. (ed.) *Archäologie des Mittelalters und Bauforschung im Hanseraum. Eine Festschrift für Günther P. Fehring*, 297–310. Konrad Reich Verlag, Rostock.
- Strömbom, S. 1923. *Forsknigar på platsen platsen för det forna Nya Lödöse (1915–1918)* Skrifter utgivna till Göteborgs Stads trehundraårsjubileum V, Göteborgs Litografiska Aktiebolag, Göteborg.
- Tevali, R. 2010. Fancy jugs for everyone! Stoneware from the Engelskär wreck 1996–2007. Archaeology. Unpublished Master's thesis, University of Helsinki.
- Wessman, S. 2007. Ship fragments on the sea floor. In Immonen, V., Lempiäinen, M. and Rosendahl, U. (eds) *Hortus Novus. Fresh approaches to medieval archaeology in Finland*. Archaeologia Medii Aevi Finlandiae (AMAF) XIV, 140–150. Suomen keskiajan arkeologian seura, Saarijärvi.