

Archaeological Evidence from Lübeck for Changing Material Culture and Socio-economic Conditions from the 13th to the 16th Century¹

By GÜNTER P. FEHRING

THIS ARTICLE is based upon archaeological evidence from Lübeck, the capital of the Hanseatic League on the Baltic Sea. Discussed are examples of the material culture and the environment of different socio-economic quarters of the town and their transformation between the 13th and the 16th century. Evidence of the town's topography, urban plots and house-building is presented, and of everyday life including handicrafts, trade and food supply.

INTRODUCTION

Within the last fifteen years several research projects on the archaeological, architectural and socio-economic history of the historic core of the modern Hansestadt Lübeck and of its predecessor, Slavic Alt Lübeck, situated 4 km to the north, have contributed new insights regarding urban development in northern Europe.² Owing to their geopolitical situation the most conspicuous among the strongholds of the early Slavic period were Bucu, on the isthmus of Lübeck's town hill, and Alt Lübeck, at the confluence of the rivers Schwartau and Trave.

SLAVIC ALT LÜBECK³

The stronghold of Alt Lübeck, erected by 819, developed in the 11th century into the residence of the Nakonids, who were the lords of the great West Slavic empire of the Obodrites. They were anxious to have good relations with their German and Danish neighbours and it was they who built up Alt Lübeck, by creating a settlement for craftsmen and long-distance merchants, an overseas trading-station that can be described as in an early phase of urban development in the last decades before its final destruction in 1138. The Alt Lübeck of this period, with its threefold division into stronghold with princely residence, craftworkers' settlement and harbour with a settlement of long-distance traders already contained all the socio-economic and topographical elements that are the most important attributes of the German Lübeck founded in 1143 on a site farther up the Trave. The overriding importance of Alt Lübeck in the late Slavic period is indicated by the facts

that it has very few parallels in the Slavic Baltic region and that the German founders transferred the well-known Slavic place-name Liubice (Latin *Lubeca*) to the new site.

GERMAN LÜBECK

German Lübeck, founded in 1143 and refounded in 1159, is known as the 'first Western town on the Baltic coast'. It became the 'springboard' of northern European trade and finally the capital of the Hanseatic League. Based upon archaeological evidence from this town, examples of the material culture and environment of different socio-economic quarters will be discussed, and their transformation between the 13th and the 16th century. Evidence of town topography, urban plots and house building will be presented, and of everyday life including handicrafts, trade and food supply.

Natural and Pre-German topography (Fig. 1)

The natural topography of the town's hill on the peninsula between the R. Wakenitz and R. Trave shaped the settlement's socio-economic layout in nearly all periods. The strategic position of the isthmus in the north determined the siting of several castles and fortifications; the western slope towards the harbour on the R. Trave proved ideal for quarters devoted to maritime trade. Activities not directly connected with the sea, especially craftworking, and institutions such as monasteries developed on the eastern slope.

Until fifteen years ago, historians, using written sources, thought that Lübeck had been founded in 1143 and refounded in 1159 on *tabula rasa*. Archaeology has revised this history. Recent excavations have uncovered evidence of far earlier occupation, both Germanic and Slavic.⁴ Now we must assume that in the middle of the 12th century the so-called German founders of the town transformed existing large-scale Slavic occupation into a long-distance trading-settlement. Only gradually did the town evolve in the legal sense. Finds of those early periods show that basic features of Lübeck's street plan, above all its main axis, go back to the Slavic and probably even to the preceding Germanic period.⁵ Only the rectangular grid of roads down to the rivers seems to be an innovation of the mid 12th century. But these roads were built only successively; excavations on the shore of the R. Trave in the west showed important transformations in the organization of the harbour and its trade.

The harbour and the transformation of trade and the market (Fig. 2)⁶

In the second half of the 12th century one of the roads, the Alfstraße, seems to have ended at the gates of the town wall; outside there was only a wooden path. Between the first town wall and the wooden quay-front, the oldest of which is dated by dendrochronology to 'about 1157', there was a large zone which yielded archaeological finds. Nails and rivets, caulking-irons and other fragments typical of ships of different types were excavated; below these were weights of fishing nets,

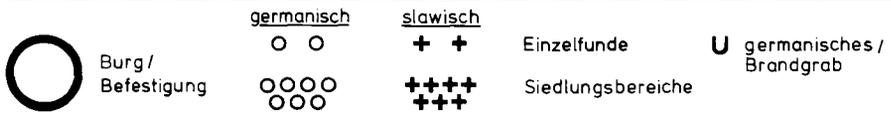
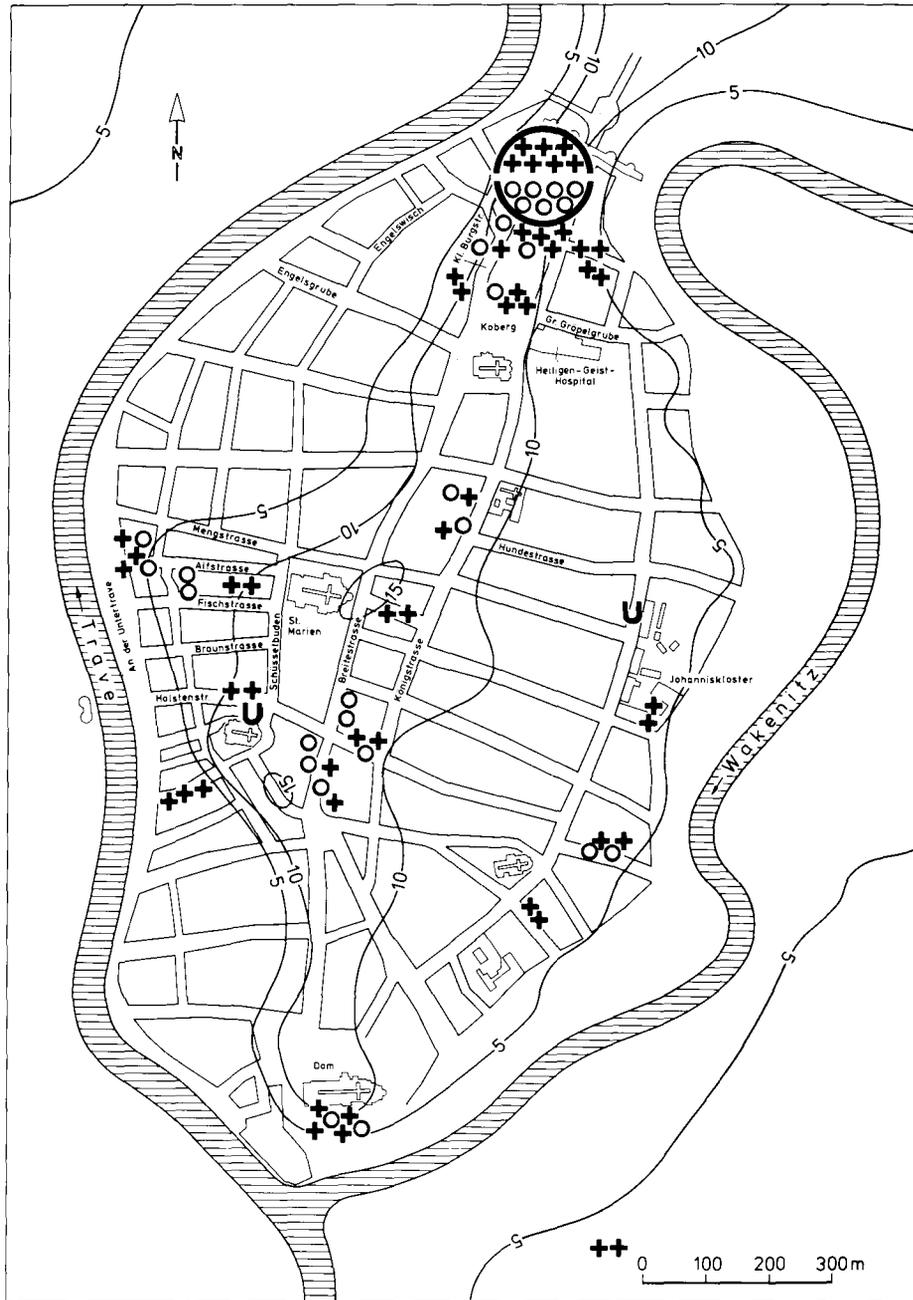
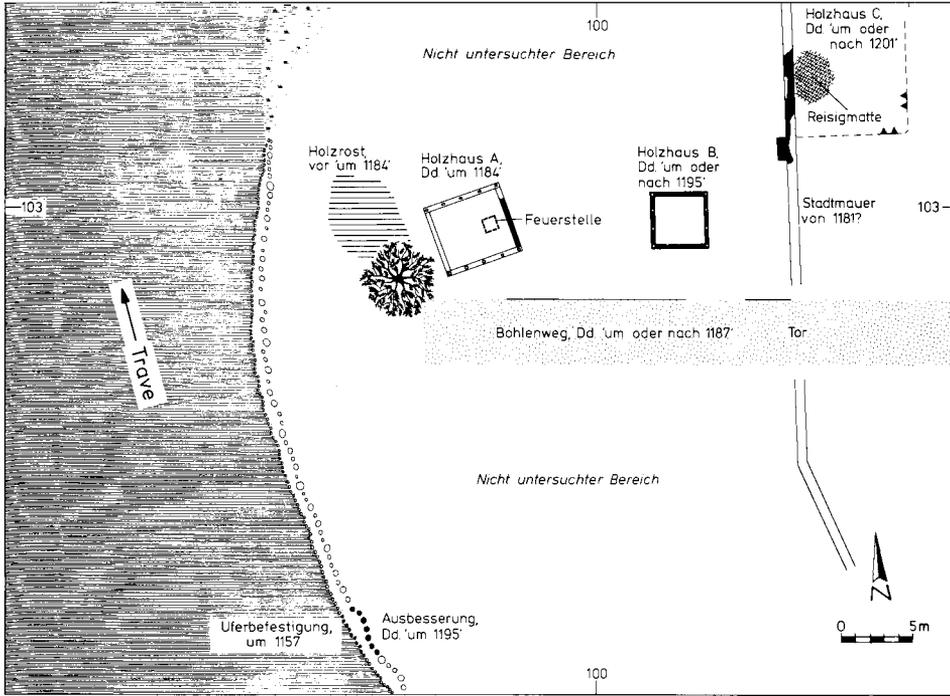


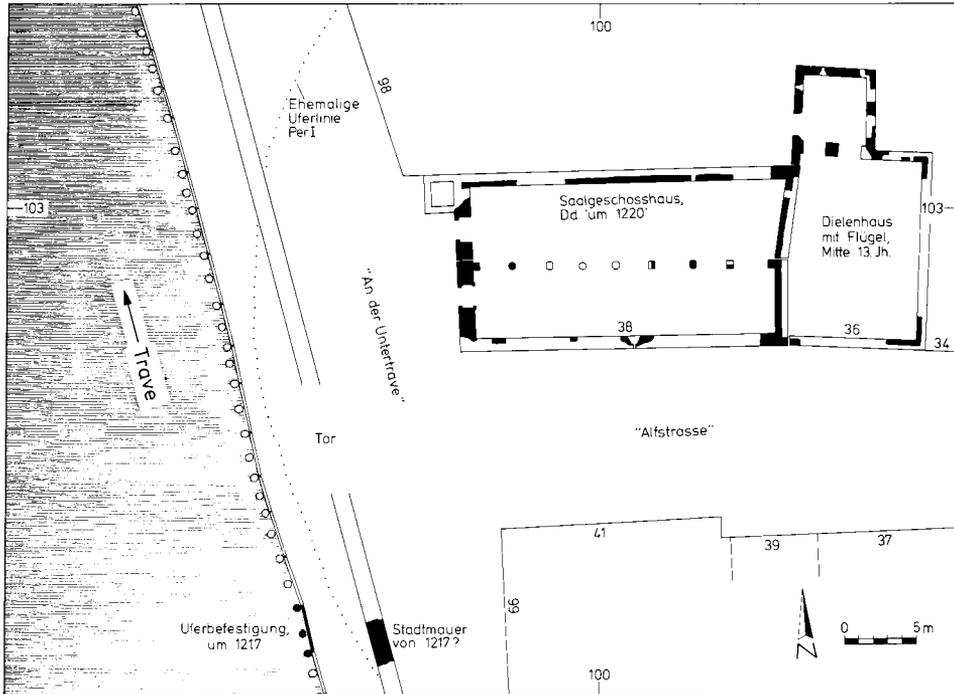
FIG. I

LÜBECK (F.R.G.)

Contour lines, street pattern and reconstruction of river-courses. Distribution of Germanic and Slavic finds and archaeological sites (after Fehring and Hammel, op. cit. in note 2)



1



2

FIG. 2
 LÜBECK (F.R.G.)
 Harbour area Alfstraße/An der Untertrave. 1. second half 12th century; 2. first half 13th century (after Gläser, op. cit. in note 6)

pot-sherds and musical instruments like flutes. Finds like these are typical of the shorefront market-places of many early medieval sea-trading centres, where the long-distance merchants stayed overnight, repaired their ships and sold their goods.

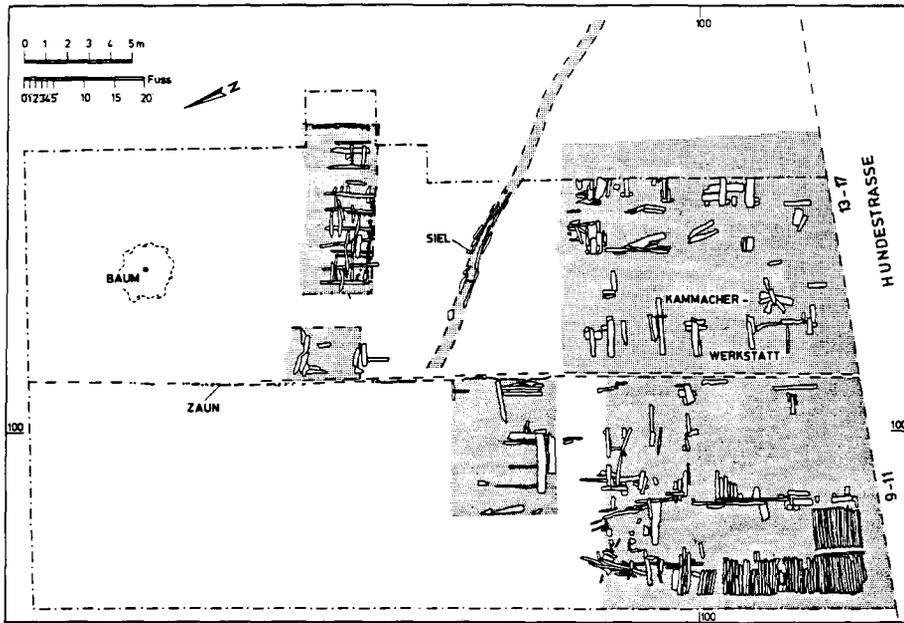
Here, from 'about 1184', small wooden houses were erected, apparently to serve this harbour. But in the years 'around 1220' the whole topographical plan changed completely. The former market-place between the shore and the first town wall was abandoned and in its place, just behind the shore, a new town wall was erected. Its gate connected with the extended transverse road, the Alfstraße, and a substantial building was erected of bricks. A dendrochronological date of 'about 1220' signifies on the one hand the end of the early sea-trading market-place parallel to the shore; on the other hand it signifies the beginning of the new type of sea-trading town with a fairly regular grid of streets, flanked increasingly by new merchants' houses. This new topography reflects a new trade structure. From this time onward most of the goods and above all the trading negotiations must have moved into the merchants' houses; and from documentary evidence we know that in the 13th century merchants increasingly chose not to accompany their ships and goods overseas but directed their trade from their houses.

*Structure of urban plots (Figs. 3 and 4)*⁷

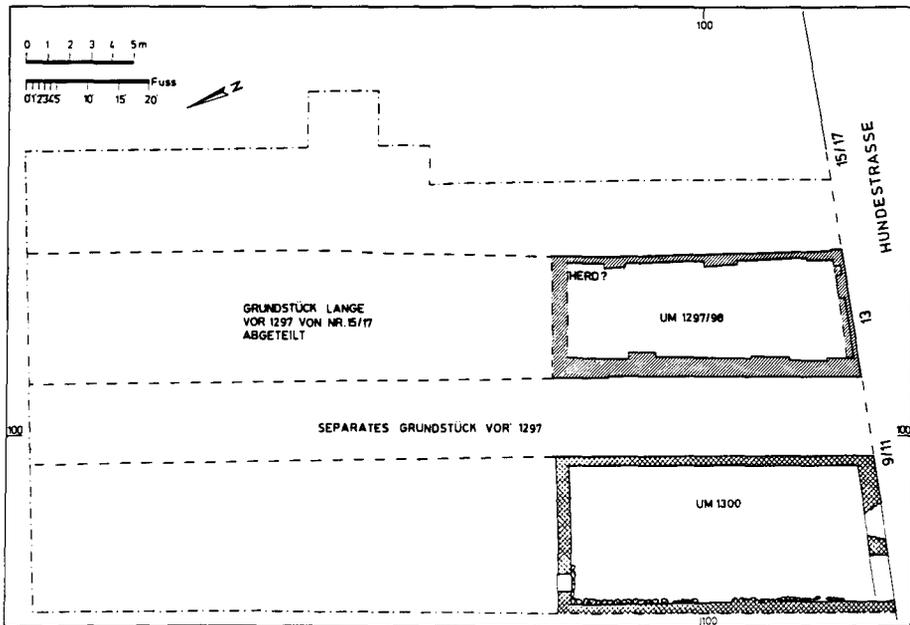
Transformation of topography and trade influenced the material environment, the structure of urban plots. Until fifteen years ago, historians thought that the long and narrow plots at Lübeck, shown on the town maps of the 18th and 19th centuries, resulted from land distribution during the town's foundation in the middle of the 12th century. Plots like those at Lübeck were claimed to be typical of European towns of the 12th and 13th centuries. A view of Lübeck drawn by Elias Diebel in 1552 shows that such long narrow plots, with houses built close together, existed in the 16th century. Excavations in several parts of the town, supplemented with studies of medieval land registers, have shown, however, that this 16th-century layout resulted from many subdivisions of properties, a process which began in c. 1200. In one of the eastern crossroads, the Hundestraße, five plots, Nos. 9-17, were completely infilled with houses only by the beginning of the 17th century. These five plots resulted from divisions of three properties, which in the 14th century were only partly filled with houses. In the second half of the 13th century there existed on the same plot only two properties, with wooden structures. At the beginning of development in the early 13th century there existed a single large tenement.

The division of larger properties into smaller ones occurred more or less quickly in the different socio-economic quarters of the town. Documentary evidence indicates that in the merchant quarters the high prices of properties curtailed further division by the end of the 14th century, whereas in quarters like the Hundestraße with lower property prices, subdivision continued into the 17th century.

Archaeologists and historians have observed structural transformation of urban properties similar to those at Lübeck in several European towns, including Basle, Switzerland and London. The growth of economic power and the growing population served as the context for such division of urban properties.



1



2

FIG. 3
LÜBECK (F.R.G.)

Tenements Hundestraße Nos. 9-17. 1. Division into two plots, first half 13th century;
2. Division into four plots, end of 13th century (after Erdmann; cf. Fehring and Hammel,
op. cit. in note 2)

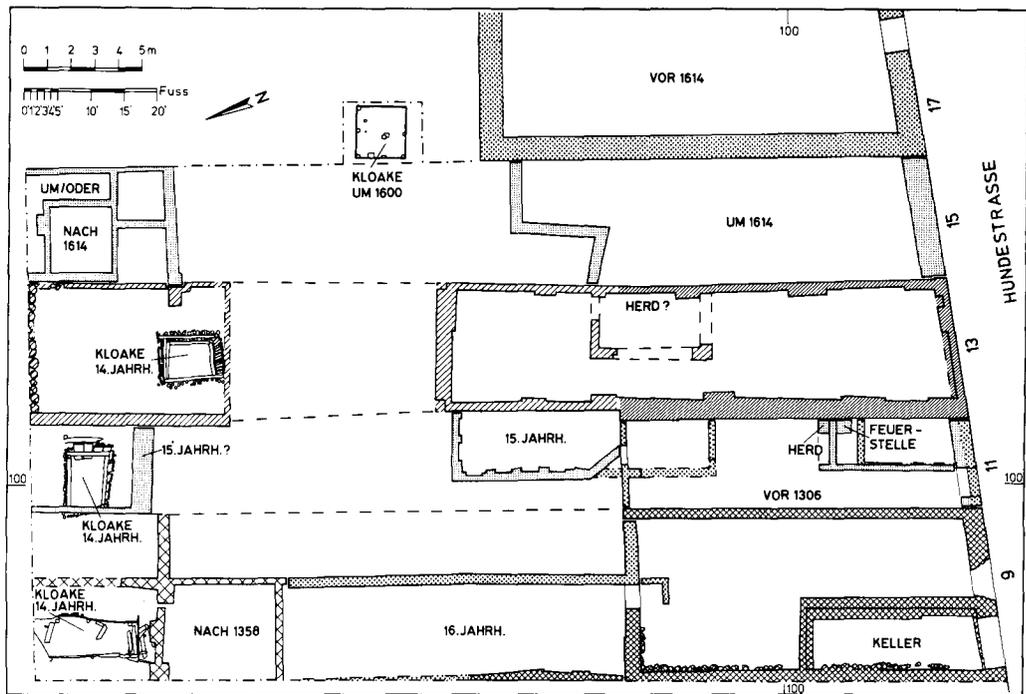


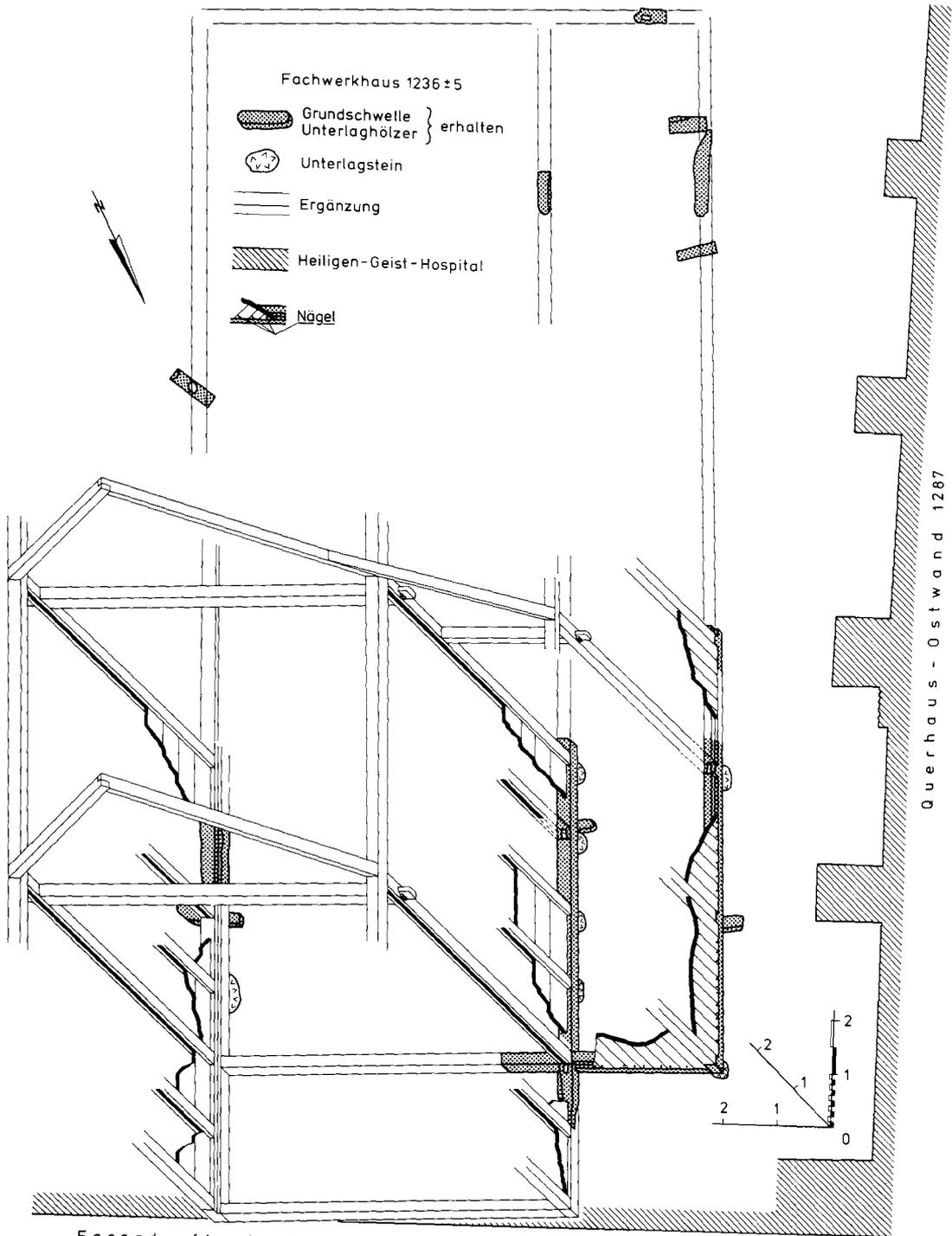
FIG. 4

LÜBECK (F.R.G.)

Tenements Hundestraße Nos. 9-17; division into five plots completely infilled with houses, early 17th century (after Erdmann; cf. Fehring and Hammel, *op. cit.* in note 2)

House-building (Figs. 5-8, Pl. v)⁸

The transformation of urban house-building offers additional evidence of changes in material culture and socio-economic development. In Lübeck nearly all existing houses from the late 13th century onward belong to the type of brick-built house called *Dielenhaus*. The *Dielenhaus* is widespread on the southern coasts of the North Sea and the Baltic and it was thought to go back to the period of Lübeck's foundation. Now it is known from excavations that this house type is quite late, in the second half of the 12th century nearly all Lübeck houses being still built of wood. The earliest housing followed a proto-historic tradition with earth-fast posts. They were superseded by framed constructions on sillbeams, like one of c. 1236 excavated beneath the Holy Ghost Hospital (Fig. 5). With a ground-plan of 22 m × 9.5 m, it had the dimensions of a large hall. Constructions like these formed the buildings on the street frontages. They served as dwellings and above all for economic purposes. In the back of these buildings, facing on courtyards, Lübeckers sometimes built tower-like heatable buildings with a cellar and several storeys of living space (Fig. 6).⁹ Late 12th-century wooden cellars of this type survived (Pl. v, A). In the 13th century they were built of brick and became known as *Steinwerk* (stone-work) or



Fassadenflucht 2. Längsgebäude um 1302

FIG. 5
 LÜBECK (F.R.G.)
 Townhouse at Große Gröpelgrube from c. 1236. Excavated sillbeams and reconstruction

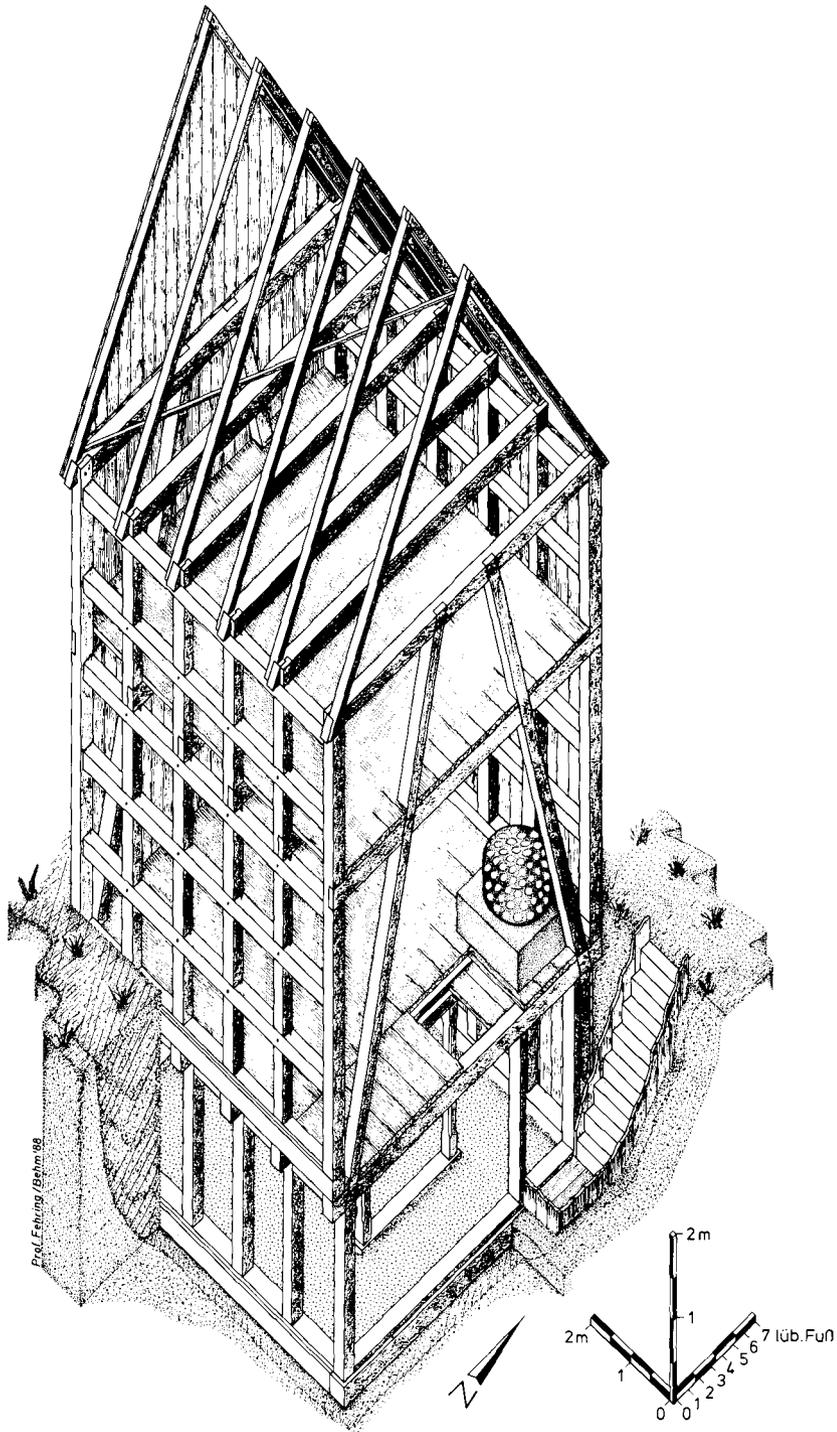


FIG. 6
 LÜBECK (F.R.G.)
 Merchants' quarter between Alfstraße and Fischstraße. Reconstruction of a tower-
 like heatable *caminata*, late 12th century

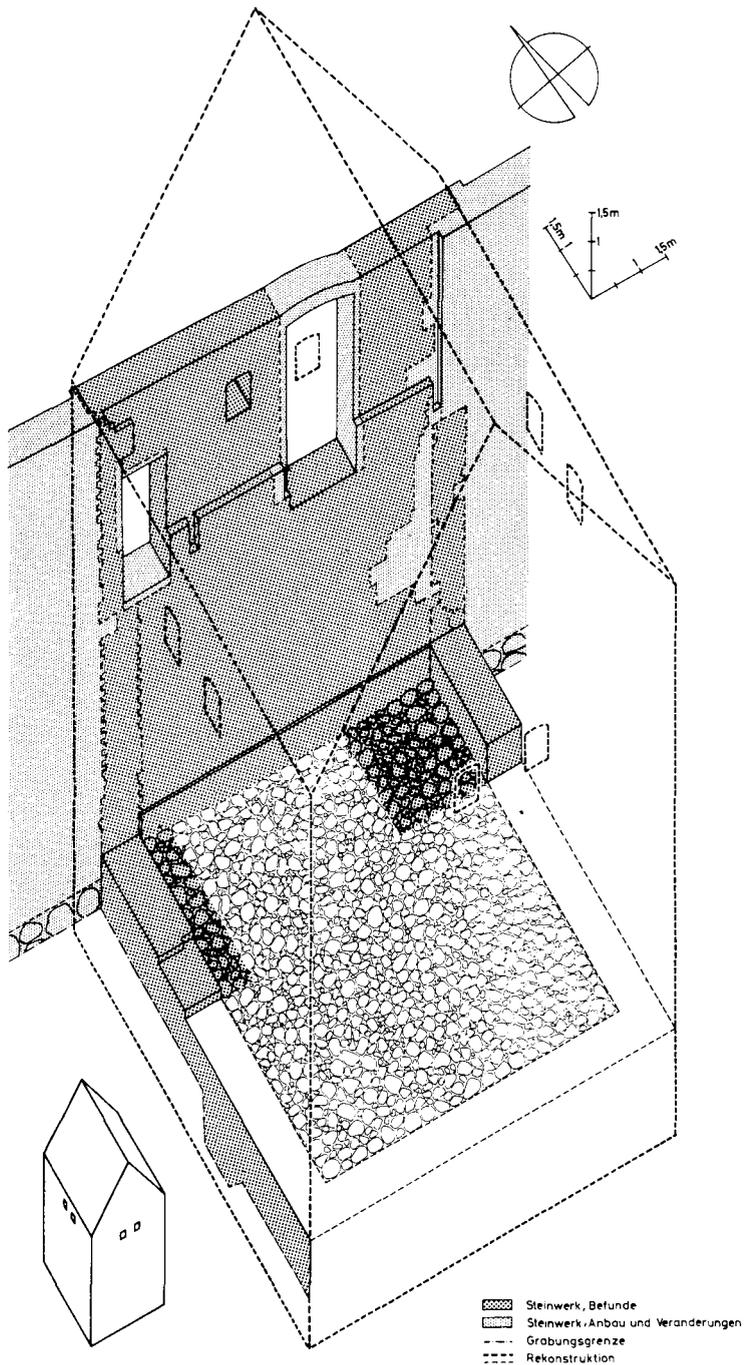


FIG. 7

LÜBECK (F.R.G.)

Holy Ghost Hospital. Towerlike *caminata*, built of brick, second half 13th century

— if heatable — *Kemenate (caminata)* (Fig. 7). For the long-distance merchants of the upper classes they served as dwellings and/or as storage for precious goods.

During the 13th century only a few of the main buildings, those erected by the wealthiest merchants, were built of brick. Some of them belong to the representative type of the so-called *Saalgeschoßhaus*, which are claimed to derive from chamber-blocks in the castles of the nobility. Typical of this type is a voluminous cellar for storing and selling goods, and large halls in each of the upper storeys. A similar type is represented by the so-called Cranen-Konvent of the Beguin order from 1282 (Pl. v, B).¹⁰

Only in the second half of the 13th century, after several great fires, did the brick-built *Dielenhäuser* supersede wooden housing: they take their name from the *Diele*, the large hall on the ground floor which served both domestic and economic purposes and sometimes as a guild hall. The most important innovation of this new house type was the large storage rooms in the upper storeys and in the loft (Fig. 8). The creation of this new housing type is the consequence of a fundamental change in N. European trade. Hitherto trade had been based upon relatively small quantities of single items; now bulk trade based on large quantities, above all of grain and salt, demanded storage on a different scale. The new type of *Dielenhaus* served for several

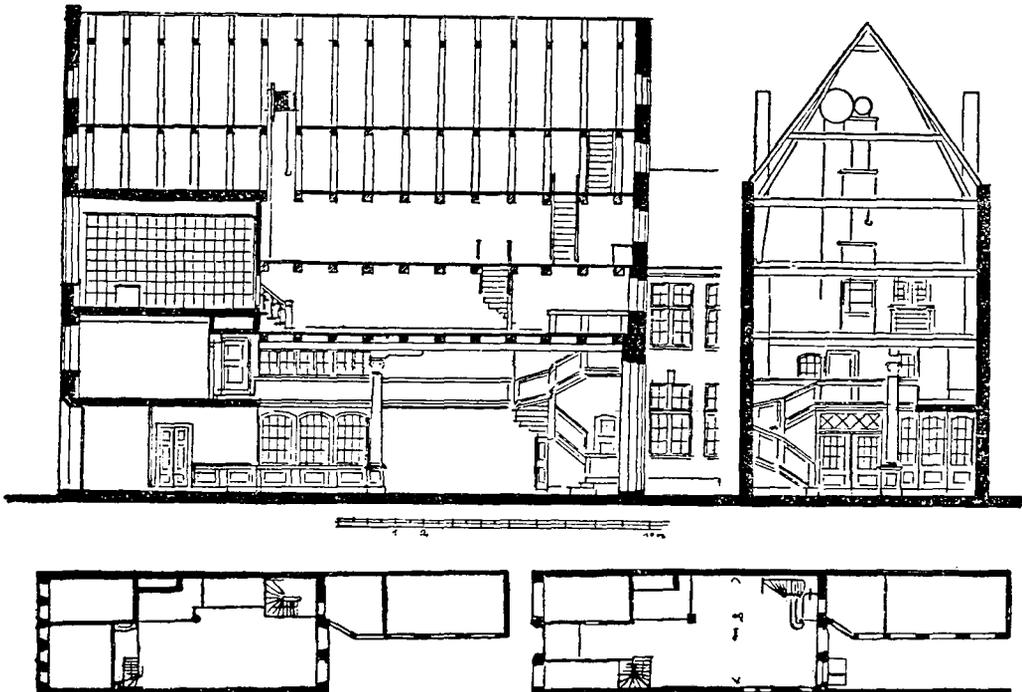


FIG. 8

LÜBECK (F.R.G.)

Dielenhaus Mengstraße 48; ground-plans and sections (after Fehring, op. cit. in note 8, based upon Poppe 1944)

centuries for all purposes (Pl. v, c); only the size and the heating system reflected different socio-economic backgrounds. Big houses of this type served merchants, small ones the craft households.

*Water supply*¹¹

Water supply varied from one area to another. In the 12th and 13th century Lübeckers relied on wells of wood, stone and bricks for their water, but from 1294 onward the merchants and brewers built several private waterpipes running from the R. Wakenitz up to the town's hill for their water supply. This improved hygiene contrasted with that in the quarters of the lower classes, who even in the 19th century had still to get their drinking-water from wells, as is demonstrated by the distribution of the cases of death during the severe cholera epidemic then.

II

Handicraft

Archaeologists have also revealed work-shops, raw materials, waste products and the artefacts of handicraft production at Lübeck. A 13th-century pottery kiln was discovered at the Koberg-place on the main road axis in the north of the town (Fig. 9)¹² and much rubbish from pottery production at five other places in the vicinity. The street name, Gröpelgrube, also indicates that, over the whole of the 13th century, Lübeckers produced much pottery in the northern sections of the town. Of the same 13th-century date is the excavated production site of a bronze foundry complete with ovens, forge and thousands of fragments from casting moulds.¹³ It is situated likewise on the town's main road, Breitestraße No. 26, not far south of the Koberg kiln. The archaeological evidence has shown that on the north central portion of the town's hill there existed in the 13th century sporadic craft workshops, which posed a fire risk for the neighbourhood.

While in the 13th century this must be called a craft quarter, in the 14th century the archaeological indications of craft production cease. From written sources it is known that the highest social class of Lübeck, above all members of the town council, occupied this part of the town.¹⁴ The reasons for such a change in the socio-economic structure are still not fully understood.

Written sources from the 14th century onward give information about the regular distribution of the bakers at street corners throughout the town.¹⁵ Excavations proved the positions of the ovens and the differences in their technologies (Fig. 10).¹⁶ From the craft quarters in the east of the town we have excavated pits and vats of a tanner's workshop. Further on in the Hundestraße were found the production materials of a comb-maker and the debris of a maker of rosary beads, also dating to the 13th century.¹⁷

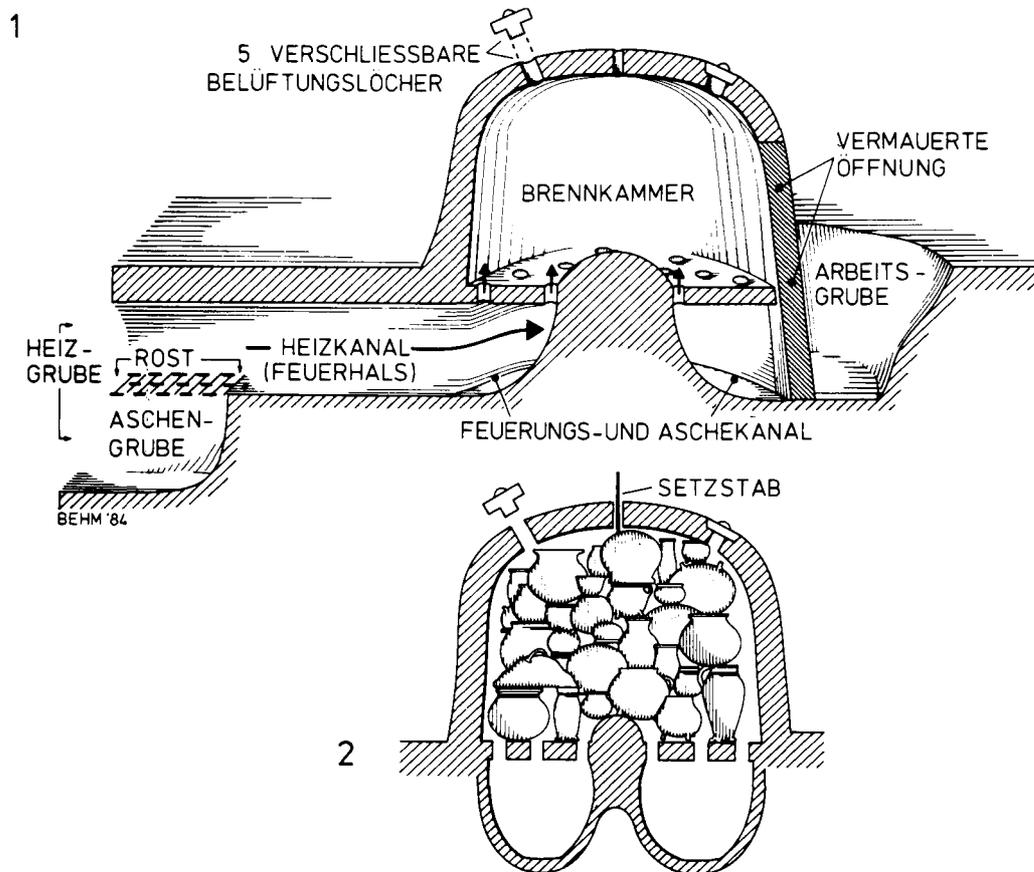


FIG. 9

LÜBECK (F.R.G.)

Reconstruction of the Koberg-place pottery kiln (after Meyer, op. cit. in note 12, based upon K. Buchin and W. Erdmann, 1986)

Trade

Archaeological evidence for trade is based upon finds of imported materials at Lübeck. Hundreds of thousands of pottery sherds allow some quantitative analysis.¹⁸ Throughout the 13th century, about 90 per cent of the pottery, the late medieval blackware, came from local centres of production and c. 10 per cent belongs to a higher quality of imported goods. Nearly all of these imports were jugs, no doubt used for serving beer and wine at table. Throughout the 13th century and into the 14th these jugs were a red-glazed decorated ware, which — apart from a few home-made examples — had been imported from production sites in the North Sea and western Baltic countries (Fig. 11). In the late 13th and in the 14th century, however, the types of import and their trade routes changed. From the 14th century, and especially in the 15th and 16th centuries, imports of the new high-quality stoneware came from Lower Saxony and above all from the Rhineland.

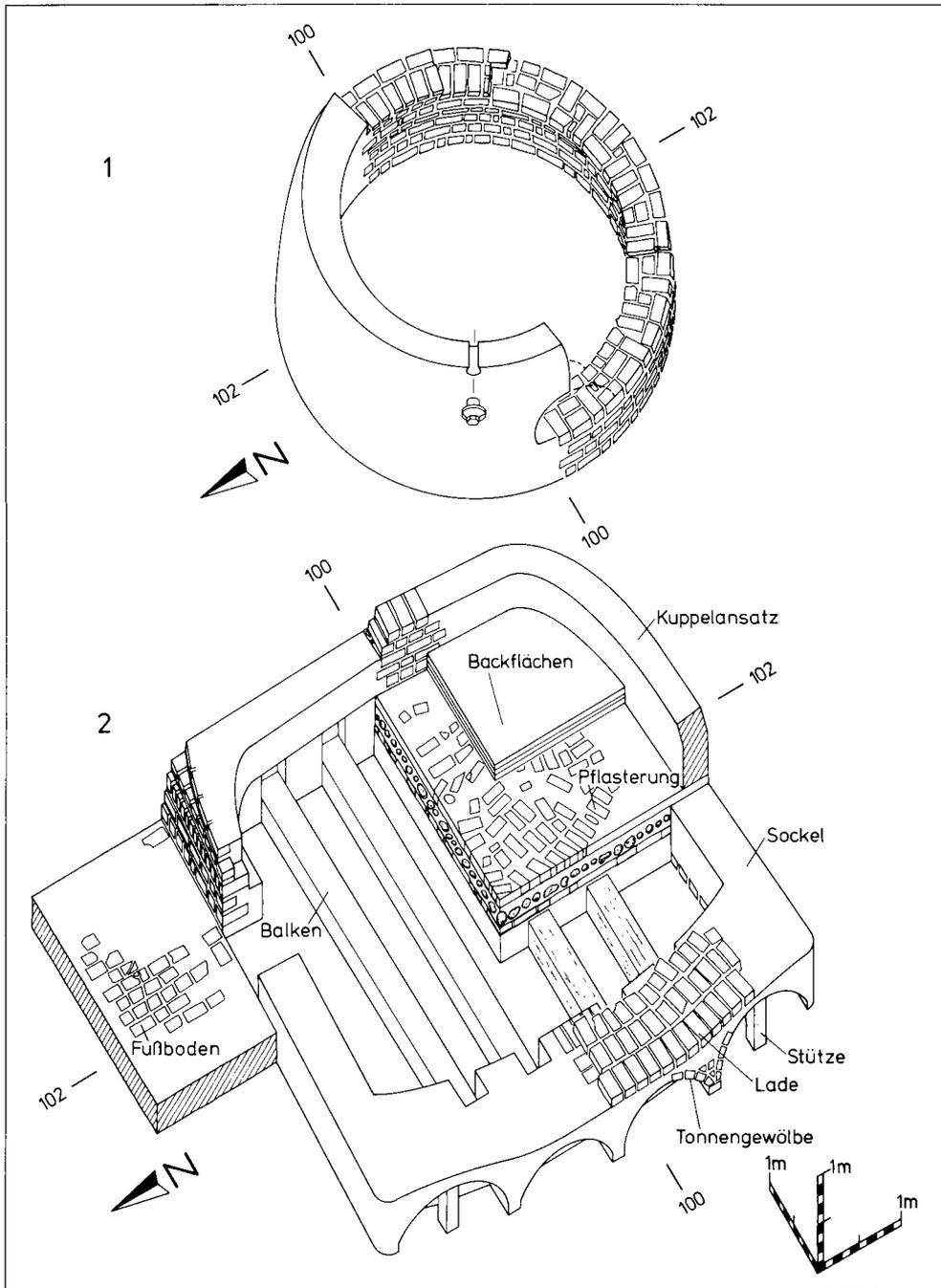


FIG. 10

LÜBECK (F.R.G.)

Tenement at the corner of Engelsgrube and Engelswisch. Ovens, 1. c. 1307/30, 2. c. 1600 (after Gläser, op. cit. in note 16)

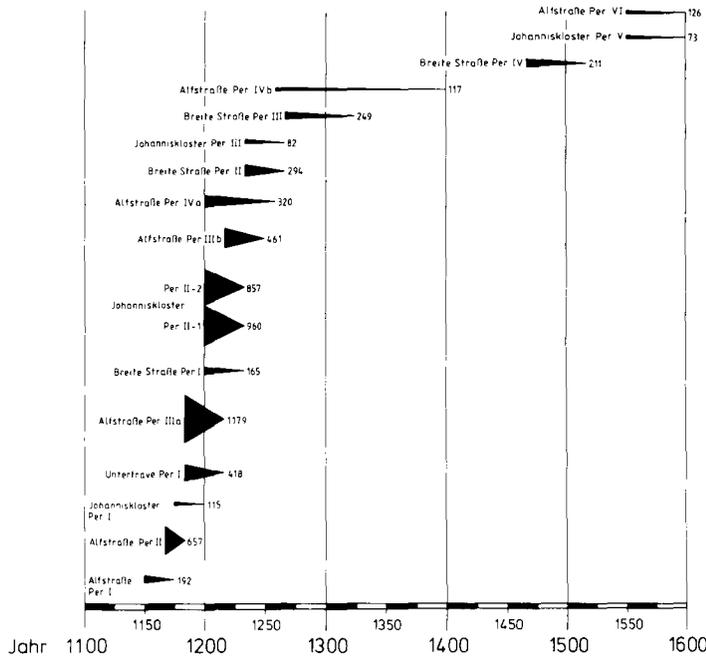
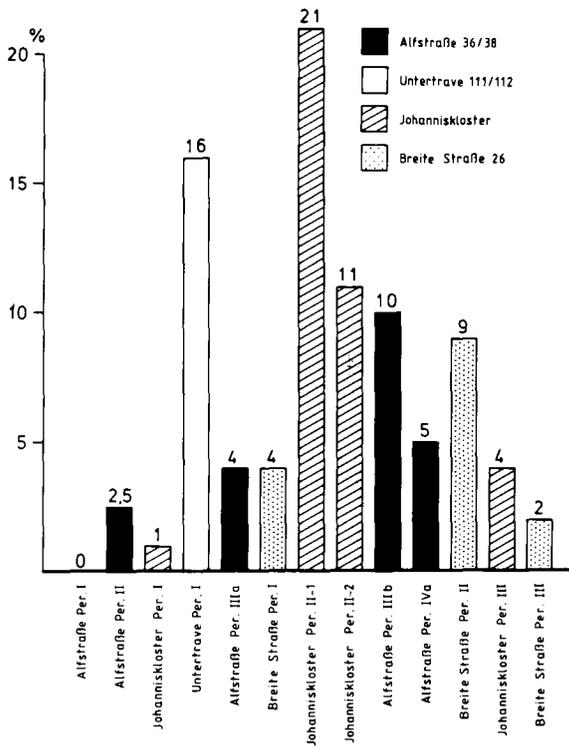


FIG. 11
LÜBECK (F.R.G.)
Diagrams of pottery finds from different periods of the four excavated sites Alfstraße 36/38, Unterrave 111/12, Johanniskloster and Breite Straße 26. 1. dating and quantities of the finds from sites and periods; 2. percentages of imported red wares from the sites and their periods (after Gläser, op. cit. in note 18)



Imported glass rarely appears in the 13th century, although one Syrian glass beaker¹⁹ of the second half of that century was found in a well with mid 14th-century rubbish. Documents reveal that the well was on property which belonged to the town-council and *Bürgermeister* family, von Plescow, merchants of the highest social class. The only other glass of this type was found in the Benedictine monastery of St Johannis (St John's).²⁰ At the monastery the percentage of imported pottery and of other precious goods was considerably higher than at other places within the town.

The relations between imported or precious finds and social topography

The archaeological finds thus reflect to a certain degree different social backgrounds. But it is still difficult to get reliable information about the social status of a property's inhabitants from archaeological finds alone. In one research project detailed documentary evidence was assembled about the social status of the property owners and inhabitants of Lübeck from the late 13th century onward.²¹ This showed that in the merchant and artisan quarters the social structure was not as homogeneous as hitherto assumed. Our map (Fig. 12) shows that in the typical merchant quarter of the first half of the 14th century there also lived a remarkable number of craftworking households. Comparison of the archaeological finds from the documented properties of people of different socio-economic backgrounds had an unexpected result. On sites of the upper social classes appeared the occasional precious object, and imported goods such as the Syrian beaker. But about 99 per cent of the archaeological material from all sites is very similar. This surprising finding is provisionally explained as follows: rubbish from the properties of the upper social classes was mixed with the rubbish of members of the lower classes, who lived on the same plots; on the other hand, and more importantly, basic household equipment — as represented by archaeological finds — must have been nearly the same throughout all social classes.

Food supply

As evidence for household food supply from different excavation sites there exist hundreds of thousands of excavated animal bones. Analysis has discovered remarkable differences regarding the relative quantities of different domestic animals in the Lübeck diet (Fig. 13).²² Consumption of pork decreased, while that of cattle increased considerably. Between the 13th and the 15th/16th centuries, cattle grew not only in importance but in size, as a result of new breeding techniques. Kernels of figs, grapes and walnuts from the rubbish pits also demonstrate increasing speciality imports of condiments in the late Middle Ages.²³

Household material culture

Research is also concerned with the development of household material culture, which underwent much change over the medieval period. The local pottery, black ware, had reached a new technological standard by the late 12th or early 13th

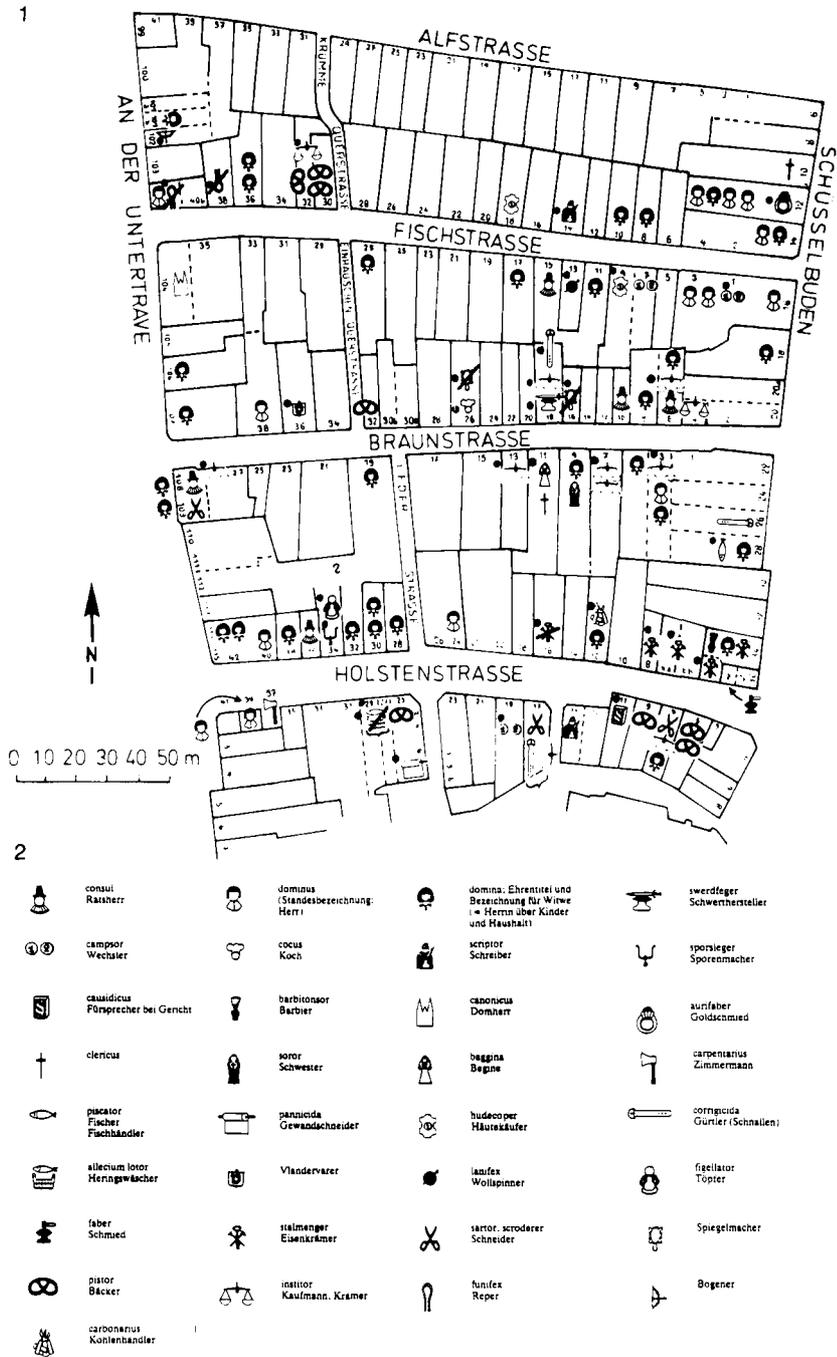


FIG. 12

LÜBECK (F.R.G.)

1. tenements of the 'merchants' quarter', 1284-1348, with symbols referring to the occupation of the property owners; 2. symbols of the occupations (after Falk and Hammel, op. cit. in note 21)

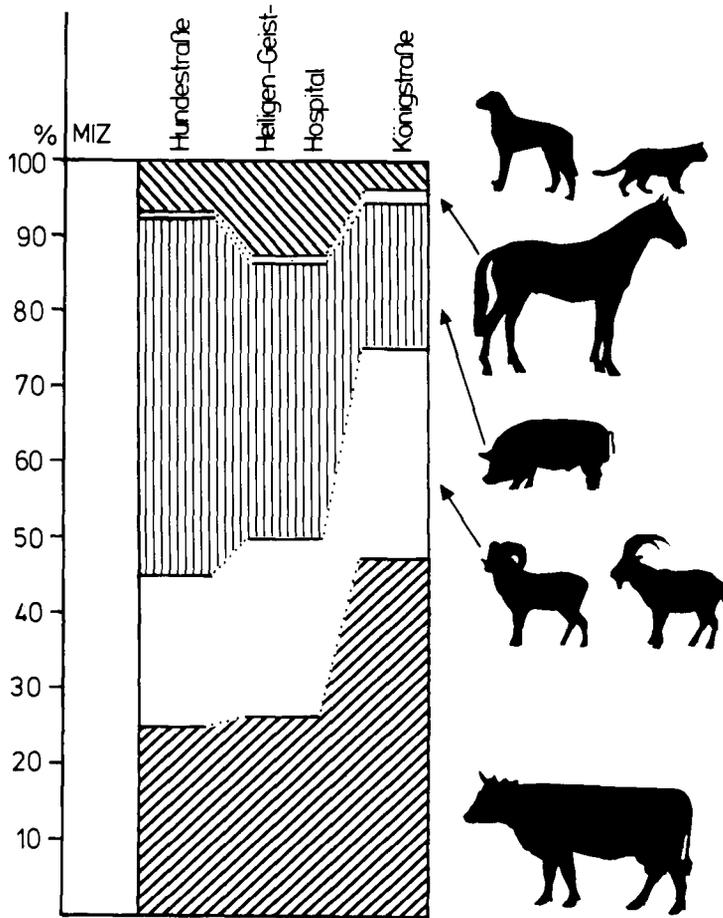


FIG. 13
LÜBECK (F.R.G.)
Diagram of the relative quantities of different domestic animals in the diet, based upon four excavated sites (after Reichstein, op. cit. in note 22)

century. Prior to that only a few functional types like pots and jugs were produced. From this time onward the numbers and qualities of the ware increased (Fig. 14);²⁴ the variety grew again and remarkably in the 15th century, when new forms including a number of bowls, dishes, plates, bottles and beakers appeared. While the import of stonewares continued after the late 15th century, local production changed completely. From this time, the third quarter of the 15th century, red-glazed and decorated wares dominated the town's pottery for several centuries.²⁵

During the 13th century, Lübeck also used wooden dishes and all drinking vessels were of wood.²⁶ Gradually from the late 13th century onward and increasingly in the 15th and even in the 16th centuries glass superseded wooden drinking vessels.

Silver, copper-alloy and tin beakers and pitchers seem to be underrepresented in the archaeological material.²⁷ Indeed metal finds of any type are comparatively rare. But from the many thousands of citizens' wills from the 13th century onward it

	Spielzeug	Lampe	Deckel	Schüssel, Schale, Pfanne	Becher, Tasse	Krug, Kanne	Grapen	Kugeltopf mit Henkel	Kugeltopf mit Stiel	Kugeltopf
Alfstraße Per. I					■			■		■
Alfstraße Per. II					■	■				■
Johanniskloster Per. I						■				■
Untertrave Per. I						■				■
Alfstraße Per. IIIa			■		■	■		■		■
Breite Straße Per. I				■		■				■
Johanniskloster Per. II-1		■		■	■	■	■	■		■
Johanniskloster Per. II-2				■	■	■				■
Alfstraße Per. IIIb				■		■	■			■
Alfstraße Per. IVa						■		■		■
Breite Straße Per. II				■	■	■				■
Johanniskloster Per. III	■					■		■		■
Breite Straße Per. III				■		■	■			■

FIG. 14

LÜBECK (F.R.G.)

Diagrams of pottery types from different periods and the four excavated sites Alfstraße 36/38, Untertrave 111/12, Johanniskloster and Breite Straße 26 (after Gläser, op. cit. in note 18. For absolute dates, cf. Fig. 11)

is known that such metalware formed a small, and from the 15th to the 16th century an increasingly large, proportion of the household equipment of the upper and middle social classes.²⁸

In a similar way the development of textiles and leather products²⁹ can be demonstrated by archaeological finds. Shoes in the early centuries were composed of only a few pieces, mainly leather uppers and single soles. In the later centuries shoes were composed of more pieces, such as reinforcements, double soles and separate heels.

III

Results and conclusions

1. The basic socio-economic layout — the main axis of the street pattern, the castle on the isthmus and perhaps the harbour in the west — was shaped by natural topography and goes back to the pre-German periods. After the foundation of German Lübeck in the middle of the 12th century, its most important element was an open long-distance market in the early medieval tradition on the shore of the harbour. But from about 1220, as a consequence of a fundamental change in N. European trade, this market was abandoned, new merchant houses appeared and the regular pattern of the town was extended. Lübeck developed as an exemplar of the new sea-trading port. The quarter of St Jacobi (St James) changed from a craftworking neighbourhood to a domestic quarter favoured by the highest social class in the 14th century.
2. Regarding material environment and culture: the repeated subdivisions of large plots reflect economic and demographic growth; the different pace of this development reflects the different property values in the various quarters. Even more evident is the enormous progress of house building: house styles changed from one-storeyed as well as tower-like wooden constructions to various different brick-built types with several storeys and finally to the Dielenhaus with large storage-rooms as a response to changes in the scale of trade. Here also different sizes depended on the socio-functional background.
3. In a similar way the archaeological finds show the development of domestic wares and food supply within the households: not only were there increasing quantities, but above all there was an increasing diversity of materials and types, accompanied by considerable technological progress in craft production. This development embraced different activities, ranging from improved cattle-breeding to grain cultivation.

Thus, regarding both town development and material conditions as a whole, archaeological research has yielded considerable information about greatly increasing wealth in one of the leading towns of the late Middle Ages. But although there are no reliable remains from the lowest social classes, it must be assumed that daily life — as represented by the material culture of the household — was very similar for most classes. For this reason it is often difficult to define socio-economic backgrounds from archaeological finds alone.

Written sources help to answer questions about material culture. Documents reveal a sharper picture of a widening gap between rich and poor, a gap less pronounced in the archaeological record.³⁰ Such contrasts pose wider questions about consumption and material culture and underline the need for interdisciplinary projects on wealth patterns and social stratification. Ongoing archaeological research will contribute much to these new questions.

NOTES

¹ This paper was presented in a slightly modified version to the Medieval Academy of America at its annual conference on 8 April 1988 in Philadelphia (U.S.A.). I owe particular thanks to the Medieval Academy for the invitation to the Philadelphia Conference, above all to Kathleen Biddick, Assistant Professor, University of Notre Dame, Indiana, who organized the session 'Comunities and Regionalization in late Medieval Europe'. To her I want to express my special gratitude for revising and retyping the English version of my paper as well as to the Editor for his helpful alterations.

² G. P. Fehring, 'The Archaeology of early Lübeck: The relation of Slavic and German settlement sites', 267–87 in H. B. Clarke and A. Simms (eds.), *The Comparative History of Urban Origins in Non-Roman Europe* (Oxford, Brit. Archaeol. Rep. Int. Ser. 255, 1985); G. P. Fehring, 'Origins and development of Slavic and German Lübeck', in press in L. Alcock and D. Austin (eds.), *From the Baltic to the Black Sea; studies in medieval archaeology* (One World Archaeology Series, London, 1989); G. P. Fehring (ed.), *25 Jahre Archäologie in Lübeck* (= Lübecker Schriften zur Archäologie und Kulturgeschichte 17, Bonn, 1988); G. P. Fehring and R. Hammel, 'Die Topographie der Stadt Lübeck bis zum 14. Jahrhundert', 167–90 in C. Meckseper (ed.), *Stadt im Wandel, Kunst und Kultur des Bürgertums in Norddeutschland 1150–1650* Vol. 3, Katalog zur Landesausstellung Niedersachsen in Braunschweig, Stuttgart-Bad Cannstatt, 1985); A. Graßmann (ed.), *Lübeckische Geschichte* (Lübeck, 1988).

³ G. P. Fehring (ed.), *Forschungsprobleme um den slawischen Burgwall Alt Lübeck II* (= Lübecker Schriften zur Archäologie und Kulturgeschichte 13, Bonn, 1988).

⁴ For references, see note 2; also W. Erdmann, 'Der Lübecker Stadthügel in slawischer Zeit (8.–12. Jahrhundert)', 50–53 in Fehring (ed.), op. cit. in note 2; id., 'Die Aufsiedlung des Lübecker Stadthügels im 12. und 13. Jahrhundert', 63–67, *ibid.*; R. Hammel, 'Gründung und Entwicklungsstufen von Lübeck im 12. und 13. Jahrhundert', 59–63, *ibid.*

⁵ G. P. Fehring, 'Lübeck und die hochmittelalterliche Gründungsstadt im einst slawischen Siedlungsraum; Voraussetzungen, Entwicklungen und Strukturen', in press in H. Brachmann and J. Herrmann (eds.), *Frühgeschichte der europäischen Stadt* (Berlin, 1990).

⁶ M. Gläser, 'Der Lübecker Hafenmarkt und die angrenzende Bebauung; Die Ausgrabungen auf den Grundstücken Alfstraße 36/38', 125–29 in Fehring (ed.), op. cit. in note 2; I. Schallies, 'Erkenntnisse der Archäologie zur Geschichte des Lübecker Hafens vom 12.–16. Jahrhundert', 129–32, *ibid.*

⁷ Fehring, op. cit. in note 2, 74–76; id., op. cit. in note 5.

⁸ Fehring, op. cit. in note 2, 70–73; id., 'Städtischer Hausbau in Norddeutschland', 43–61 in H. Steuer (ed.), *Zur Lebensweise in der Stadt um 1200* (= Zeitschrift für Archäologie des Mittelalters, Beiheft 4, Köln/Bonn, 1986).

⁹ Fehring, op. cit. in note 2, 70–73; id., 'Domus lignea cum caminata — hölzerne, turmartige Kemenaten des späten 12. Jahrhunderts in Lübeck und ihre Stellung in der Architekturgeschichte', 271–83 in H. Heine, F. Lüth, H. Lüthke and F. Laux (eds.), *Festschrift für W. Hübener* (= Hammaburg 9, 1989).

¹⁰ J. C. Holst and M. Neugebauer, 'Der ehemalige Cranenkonvent zur Lübeck', 94–97 in Fehring (ed.), op. cit. in note 2.

¹¹ T. Lüdecke, 'Vom Brunnenwasser zum "Kunstwasser" — Die Wasserversorgung im mittelalterlichen und frühneuzeitlichen Lübeck', 143–47 in Fehring (ed.), op. cit. in note 2.

¹² D. Meyer, 'Ein Töpferofen des 13. Jahrhunderts am Koberg zu Lübeck', 133–34 in Fehring (ed.), op. cit. in note 2.

¹³ M. Gläser, 'Die mittelalterliche Bronzegießerei auf dem Grundstück Breite Straße 26', 134–36 in Fehring (ed.), op. cit. in note 2.

¹⁴ R. Hammel, 'Die Berufstopographie im 14. Jahrhundert', 63–76 in Graßmann (ed.), op. cit. in note 2.

¹⁵ Cf. note 14.

¹⁶ M. Gläser, 'Archäologische Befunde zum Lübecker Bäckereigewerbe im Mittelalter und in der frühen Neuzeit', 137–39 in Fehring (ed.), op. cit. in note 2.

¹⁷ D. Mührenberg, 'Archäologische Untersuchungen in der Hundestraße zu Lübeck', 98–101 in Fehring (ed.), op. cit. in note 2.

¹⁸ M. Gläser, 'Keramikchronologie des 12. und 13. Jahrhunderts in Lübeck', *Archäologisches Korrespondenzblatt*, 17 (1987), 387–99; W. Erdmann, 'Zur Bearbeitung der Lübecker Fundkeramik des hohen und späten Mittelalters', 299–309 in D. R. M. Gaimster, M. Redkap and H.-H. Wegner (eds.), *Zur Keramik des Mittelalters und der beginnenden Neuzeit im Rheinland; Medieval and later pottery from the Rhineland and its markets* (Oxford, Brit. Archaeol. Rep. Int. Ser. 440, 1988).

¹⁹ M. Dumitrache, 'Glasfunde aus der Lübecker Innenstadt', 155–58 in Fehring (ed.), op. cit. in note 2.

²⁰ M. Gläser, 'Die Ausgrabungen auf dem Gelände des ehemaligen Johannisklosters in Lübeck', 117–20 in Fehring (ed.), op. cit. in note 2.

²¹ A. Falk and R. Hammel, *Archäologische und schriftliche Quellen zur spätmittelalterlich-neuzeitlichen Geschichte der Hansestadt Lübeck; Materialien und Methoden einer archäologische-historischen Auswertung* (= Lübecker Schriften zur Archäologie und Kulturgeschichte 10, Bonn, 1987); *eid.*, 'Archäologisch-historische Untersuchungen zur Sozial- und Wirtschaftsgeschichte', 68–69 in Fehring (ed.), op. cit. in note 2.

²² H. Reichstein, 'Tierknochenfunde aus der Lübecker Innenstadt', 180–82 in Fehring (ed.), op. cit. in note 2.

²³ H. Kroll, 'Botanische Funde aus der Lübecker Innenstadt', 182–85 in Fehring (ed.), op. cit. in note 2.

²⁴ Cf. note 18.

²⁵ A. Falk and R. Hammel, op. cit. in note 21; A. Falk, 'Keramikfunde in der Lübecker Innenstadt', 158–61 in Fehring (ed.), op. cit. in note 2.

²⁶ A. Falk, 'Holzgefäße und -geräte aus der Lübecker Innenstadt', 162–64 in Fehring (ed.), op. cit. in note 2.

²⁷ A. Falk, 'Metallfunde aus der Lübecker Innenstadt', 152–55 in Fehring (ed.), op. cit. in note 2.

²⁸ M. Hasse, 'Neues Hausgerät, neue Häuser, neue Kleider; eine Betrachtung der städtischen Kultur im 13. und 14. Jahrhundert sowie ein Katalog der metallenen Hausgeräte', *Zeitschrift für Archäologie des Mittelalters*, 7 (1979), 7–83.

²⁹ W. Groenman - van Waateringe, 'Mittelalterliche Lederfunde aus der Lübecker Innenstadt', 170–73 in Fehring, (ed.), op. cit. in note 2; K. Tidow, 'Textilfunde aus der Lübecker Innenstadt', 173–76 in *ibid.*

³⁰ F. Verhaeghe, 'The late medieval crisis in the Low Countries — the archaeological viewpoint', 146–71 in F. Seibt and W. Eberhard (eds.), *Europa 1400; Die Krise des Spätmittelalters* (Stuttgart, 1984).