Lund and the Earliest Baltic Ware

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Abstract

Baltic ware was the most common type of ceramic in southern Scandinavia during the Early Medieval period. The origin of the vessels were Scandinavia, Northern Germany and Poland, and the influences began already during the Viking Age, but exactly when Baltic ware came into use in the Scandinavian homes has not been properly determined. It has been related to the foundation of the city of Lund, though a problem is that the date for the founding of Lund is moving ever backwards in time. Recent studies have shown that the earliest layers in Lund can be dated to the 970s, and this indicates that the pottery also originates from this period. This article discusses the earliest Baltic ware in Scania, how early the vessels could be, where they were made, and what types of vessels appeared.

Introduction

The founding of the city of Lund and the dating of the earliest Baltic ware in Scandinavia has been closely linked since the 1940s. Thanks to contacts between archaeologists in Lund and especially in Wolin in Poland, significant similarities could be noted as early as the 1920s between what would later be called Baltic ware in Lund and the Slavonic pottery from Wolin (Karlin 1923; Roslund 2001, 48 f.). Ragnar Blomqvist published a study of ceramics from Lund in 1948 and he laid the foundation for what came to be called Baltic ware, but he emphasized that the ceramics could hardly be older than 1020 (Blomqvist 1948, 155). It was above all the belief that Baltic ware could not be older than the arrival of the mint of Canute the Great in about 1020 that decided the dating, and this shows that the first studies of the pottery took into account when Lund was founded. Already in 1952, Blomqvist published another article about ceramics from Lund where he points out the similarities with Wolin, but that the vessels in Lund cannot be older than the 1000s, and he places them in time from between 1000 and 1020 (Blomqvist 1952, 154 f.). He also mentions that the Baltic ware would initially have been made by the Vends, a Slavonic tribe living on the other side of the Baltic Sea, even though he considered it strange to transport the fragile black vessels across the sea. However, the time of Lund's founding has been debated, and for a long time it was considered that the city was founded during

Canute the Great's reign (1018/1019–1035) and probably around the year 1020. Since then, large archaeological investigations have taken place, and dendrochronology have dated the oldest graves to the early 990s (Cinthio & Ödman 2018, 12). During this time, Denmark was ruled by Sweyn Forkbeard (986–1014), but based on new excavations, the city may be even older, and Lund may have been founded during the 980s, during Harald Bluetooth's reign (958/960–986). There are new dendrochronological analyses of hollowed log coffins made of oak trunks that were placed in the early 980s and these were found during excavations in 1941–1942 at the Cathedral, but the coffins could not be dated until 2017 (Cinthio & Ödman 2018, 17 ff.). Since the oldest Baltic ware is associated with the founding of Lund, the dates of the pottery should also be discussed. Despite the fact that this pottery is normally dated to the end of the 10th century, the discussions, and studies of materials from the 10th century are few. Two of the more important excavations in Lund have been those carried out at the kv. Myntet and the kv. Apotekaren 4. In the kv. Myntet almost 9,000 ceramic fragments were found, and the largest group was Baltic ware (Vandrup Martens 1993, 114 f.). Although the ceramics are dated from the end of the 10th century, the oldest buildings based on dendrochronology have been placed around the year 1000. About 96% of the pottery from the earliest phase from late 10th century to around 1050 consisted of Baltic ware. Nine different types of vessels were identified, and the types of rims were divided on 103 that were inturned, six outturned and ten were upright (Vandrup Martens 1998, 34; 2003, 323 f.). It was not possible to separate the ceramics from the late 10th century from the material dated to the 11th century. At the kv. Apotekaren 4, the oldest phase is dated with the help of dendrochronology to the period 995–1014 (Vandrup Martens 1995, 107). From that phase, nine rim fragments were found, and all were Baltic ware, and of these, eight had inturned rims. The material appears to be similar to that found in the years 1941–1942 at the Cathedral.

Fig. 1. Map showing the most important locations in Scania that are mentioned in the article.

Baltic ware as a cultural and social object, but also technological objects, is closely related to Slavonic ceramics and to the ceramic traditions that existed in northern Poland and Germany (Selling 1955). It may be difficult to separate the Baltic ware from the Slavonic, but the shape of the rims of the vessels in particular is different (Vandrup Martens 1998; 2001; 2003). Baltic ware is found abundantly in the early medieval Scanian cities, but also in the countryside, and was the most common pottery type of the 11th and 12th centuries. However, Slavonic pottery has also been found in Scania, but it is mainly the early and middle Slavonic types of Feldberg, Fresendorf, and Menkendorf, and this pottery is generally dated from the latter part of the 8th century to the early part of the 9th century (Brorsson 2003). It occurs mostly in places related to trade, such as Löddeköpinge and Åhus but also in other places such as in Östra

Grevie outside Vellinge (Brorsson 2020) and in Järrestad close to Simrishamn (Brorsson 2001). One of the few Late Slavonic vessels found in Scania (Fig. 2 C) appeared in the moat of the circular fort in Trelleborg (Brorsson 1999). This vessel is of a type called Vipperow and it is dated from 975 to the end of the 12th century, which corresponds with the dating of the fort. A similar vessel was found in a pit house in Löddeköpinge 90:1 and another Late Slavonic vessel was found in the same settlement (Brorsson 2000, 200). Another important place is the island of Mölleholmen in southern Scania. On the island in a lake, a settlement from the 11th century was found, and this location has been interpreted as having strong Slavonic connections (Kelm 2000; Vandrup Martens 2001). The ceramics are classified according to a German terminology, despite the fact that several vessels can be classified as southern Scandinavian Baltic ware. On Mölleholmen, the Scandinavian Viking Age AIV vessels are completely missing, and this is interesting since the AIV ceramics (Fig. 2 A) was the most common type of pottery that existed in southern Scandinavia during the period 700 to the middle of the 11th century. The pottery assemblage on Mölleholmen consist of pots with wavy lines, horizontal lines, and impressions, and the decorated ceramics have similarities with both Baltic ware and Slavonic ceramics, and the dwelling site has been in use at the same time as Lund was a city. The vessel shapes that occur at Mölleholmen can be classified in different ways, but the same types of vessels found in Lund would have been classified as Baltic ware. However, at Mölleholmen there was an influence of Late Slavonic vessels from the 1000s that do not normally occur in Lund. The ceramic assemblages from Lund and Mölleholmen consist of partly different types of vessels, which can be interpreted as there having been some form of cultural and/or social difference between the people living in each place (Vandrup Martens 2001). It is possible that Mölleholmen had stronger Slavonic influences than was the case in Lund. This has been confirmed, among other things, in the location of the settlement on an island, which was common in the southern Baltic Sea area (Kelm 2000, 82). In addition, a so-called *Wenden-pfennig* from the Slavonic area was found, and it is dated to around the year 1000 (Kelm 2000, Taf. 6.3). Following the model from Lund, Baltic ware in the countryside is normally dated from the latter part of the 10th century and above all the 11th century. The typology is the same and, for example, vessels with inturned rims are normally dated to the 11th century (Roslund 1992; Brorsson 2000). During archaeological investigations at Hjärup outside Lund, however, this has shown that the typology can be partly questioned. Several ^{14}C dating's have shown that the buildings in Hjärup were established in the middle of the 10th century (Schmidt Sabo 2011, 43). In one of the post holes of a house, which is located in the oldest phase, two fragments of Baltic ware appeared. In another post hole from the house, charcoal was taken for ^{14}C analysis and this gave a dating to 890–1020 (Cal. 2 sigma). Despite this and other ^{14}C dating on the surface, the Baltic ware from Hjärup has been dated to the 11th century (Brorsson 2011). The same problem has also been identified in another excavation at Hjärup. In a house that is ^{14}C-dated to 890–1030 (cal. 2 sigma), Baltic ware was found in a post hole (Schmidt Sabo 2016, 68), and despite the dating, the Baltic ware on the site has been dated to the 1000s (Brorsson 2016). The two examples from Hjärup that have been dated can of course be from the 11th century, but the probability is greater that they are older. It should also be mentioned that Viking Age AIV ceramics were found in both places, but the proportion of Baltic ware has been significantly greater.

It is possible that an important dwelling place for understanding the introduction of Baltic ware is Löddeköpinge 90:1 in western Scania. Several Slavonic vessels such as Fresendorf, Menkendorf, Vipperow, and Teterow have been found here (Brorsson 2000), but there are also large amounts of AIV ceramics and Baltic ware. The pottery has been interpreted as being locally produced during a phase dated from 950 to 1100. It is important to note that the vessel shapes that dominate Löddeköpinge 90:1 are Baltic ware, and the Slavonic vessels are in minority. The Baltic ware from the site has long been considered to be from mainly the 1000s, but there is nothing that contradicts a slightly older dating and that Löddeköpinge could be a location where both late Slavonic pottery and Baltic ware appear in parallel during the 900s. The large amount of AIV ceramics in Löddeköpinge 90:1 could indicate that the site was mainly in use until the year 1000, and not as previously considered until the year 1050. It can thus be stated that archaeological research has difficulties in identifying Baltic ware that dates from the end of the 10th century. It can also be noted that the Viking Age AIV ceramics seem to have been much more common in the countryside than in Lund. Baltic ware was produced in Lund at the time of the city's founding, while the number of AIV vessels was very low. During excavations of the kv. S:t Mikael, close to the Cathedral in Lund in 2019, for example, 3,356 fragments of Baltic ware were found, while the number of AIV fragments was only 44. This reflects, among other things, the development of the settlement, where practically all fragments of Baltic ware can be dated to the 11th and 12th centuries, and it shows how unusual AIV ceramics were at this place. The AIV ceramics on the kv. S:t Mikael was found in 11 different contexts, and in nine of these Baltic ware was also found (Brorsson 2021, 284). Based on the stratigraphy and the general dating of the ceramics, the AIV ceramics from S:t Mikael can be dated to around the year 1000 and it was in use up to 100 years in time. It cannot be excluded that the AIV ceramics can be dated to the latter part of the 10th century when the buildings seem to have been established. A rather large sherd of AIV ceramics was found in a waste layer, and ICP-analyses determined that the vessel had been produced locally in Lund, and analyses of another sherd of the same type of vessel from the same excavation indicated that also this vessel was made locally. There was thus a local production of AIV ceramics in early Lund. The earliest Baltic ware in the kv. S:t Mikael has been dated to a phase in the period 990 to 1030 (Brorsson 2021, 288).

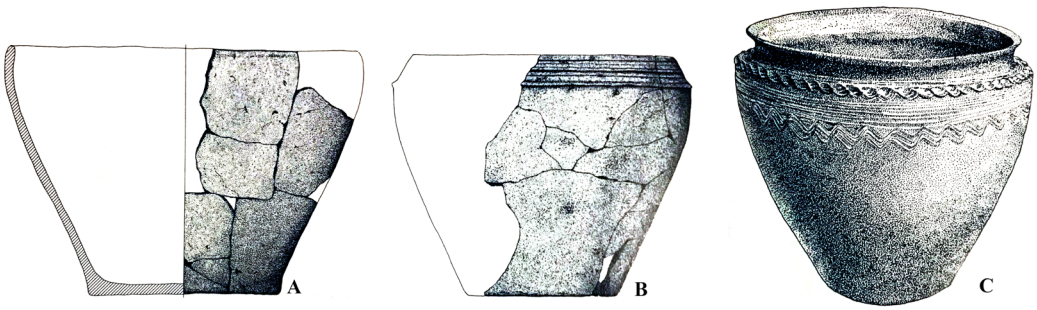

Fig. 2. Different types of Viking age and early medieval pottery found in Scania. A) Viking age AIV pottery from St. Harrie. B) Baltic ware from Löddeköping. C) Slavonic vessel from Trelleborg. Drawing by Annika Jeppsson (A-B) and Monica Centerwall (C).

The most common vessel shape was pots with inturned rims. Analyses performed on a total of eight sherds of Baltic ware from the 1000s in particular indicated that the majority of the vessels were locally produced. The result of the study of ceramics from the kv. S:t Mikael clearly shows that both AIV ceramics and Baltic ware were produced in Lund, but that AIV ceramics were very unusual in the city. On the other hand, it was more common in the countryside and in places like Löddeköpinge. The distance between Lund and Löddeköpinge is about 20 km, and the places should have belonged to the same cultural sphere, but the question is whether the differences in the composition of the assemblages are due to chronological, cultural and/or social factors?

The excavation at Lund Cathedral 1941–1942

During the years 1941 and 1942, archaeological investigations were carried out north of the Cathedral's apse. Responsible for the excavations was Otto Rydbeck who was assisted by Ragnar Blomqvist. The excavations were initiated by drainage work, and in the oldest layers a number of wooden coffins were found, but also nine log coffins made from whole oak trunks (Cinthio & Ödman 2018, 17). Wood from different logs have been studied and analysed 70 years later, which has resulted in Maria Cinthio and Anders Ödman presenting a new perspective of the excavation at the Cathedral and early Lund. Based on dendrochronological analyses, one of the coffins must have been manufactured sometime during the winter of 979/980 and it is thus the oldest dated log north of the Baltic Sea. In this coffin, a boy aged 4-6 years of age is said to have been buried in the early spring of 980. Another child's grave with a hollowed log coffin has been dated to 981/982 and until around 1000, the cemetery would have housed between 30 to 50 individuals, most of whom were children. The datings clearly show that the cemetery was in use as early as around 980, and it is thus an important contribution to the discussion about Lund's founding, but it also provides valuable information about the earliest Baltic ware. While constantly related to Lund's founding, it is difficult to demonstrate how early this ceramic really is. The stratigraphy within the excavated area is complex, but the coffins must have been buried through an older cultural layer (Cinthio & Ödman 2018, Fig. 54). On top of the layer with the graves, there must have been clay and building debris from the first phase of the cathedral, which was the end of the 1000s to the early 12th century. The only type of ceramics found in the older cultural layer, which could thus be older than the 980s, was Baltic ware. It can be noted that the excavation at the Cathedral was located approximately 100 meters from the excavation carried out in 2019 on the kv. S:t Mikael.

The ceramics from the Cathedral

During the excavation at the Cathedral, a total of 1,109 fragments of Baltic ware were found. The vessels have been of a type that is common in Lund with a dominance of pots with inturned rims and decorations in the form of wavy lines, horizontal lines, and various types of impression (Fig. 3). There were also two fragments of Viking Age AIV pottery. Two fragments of so-called *kugeltopf*-pottery have also been found, and this pottery consisted of the same type of fabric as the Baltic ware, but the rim shapes were different, and it can be further noted that the *kugeltopf*-pottery had a western European origin. A slightly younger type of ceramics consisted of two fragments of later black ware and this type of pottery was probably imported from

Fig. 3. Examples of Baltic ware from The Archbishops Cathedral in Lund. Photo by the author.

northern Germany, and the earliest finds of this type, in for example Lübeck, can be dated to the period 1150–1175 (Drenkhahn 2017, Tab. I). Sherds of early glazed red ware were found, and this type of ceramics is normally dated from the latter part of the 12th century. Both the later black ware and the glazed red ware appeared in the same layer as Baltic ware. There may have been a younger secondary interference, but in Lund it has been possible to prove that an English potter lived in the city around 1040, and he is said to have made what is called early glazed pottery according to English models (Christensen *et al*. 1994). However, the most exotic element in the ceramic material from the Cathedral is a sherd belonging to an amphora from the Iberian Peninsula. This was probably used as a transport container for olives or olive oil and some of the most important production sites for these goods were Seville and Barcelona (Hurst 1977, 98 ff.). It can thus be stated that the Baltic ware assemblage strongly dominates the total amount of pottery from the excavation, and another important result is that the number of Viking Age AIV ceramics is almost non-existent. Previous research has shown that the proportion of AIV ceramics decreases when Baltic ware began to be manufactured, which may have happened during the second half of the 10th century. In general, AIV ceramics are rare in Lund and only a few sherds have been found in the city.

The most common type of ceramics from the Cathedral, however, was the Baltic ware, and of the more than 1,100 fragments, 168 were rim fragments and it is above all these that tell us about the chronology and cultural background of the ceramics. For example, there were differences between Baltic ware and Slavonic pottery in its homelands Poland and Germany. There were also differences in the rim shapes of Baltic ware between different parts of Scandinavia, where e.g., the ceramics in Scania were made in one way while the vessels in, for example, northern Halland looked different (Roslund 1992). In addition, studies of Baltic ware from Lund have indicated that there are chronological differences, and inturned rims were common during the 1000s in Lund, while the outturned rims became more common during the 12th century. Based on the discussion above, the rims of Baltic ware are thus central to study.

From the Cathedral, 86% of the Baltic ware had inturned rims and the remaining vessels have been distributed between upright and outturned rims. Most of the vessels consisted of pots, but fragments of hanging vessels and a bowl have also been found. According to the system made by Mats Roslund in the early 2000s the vessels from the excavation should be defined as type Lu 6 and Lu 1, and these are dated to the first half of the 11th century to decrease sharply at the end of the century (Roslund 2001, 142 f.). Other common types were the shape types Lu 21, Lu 26 and Lu 28 and these are mainly dated to the first half of the 11th century (Roslund 2001, 150). The same type of rims also occurred on Slavonic vessels in Slavonic territory, where they were named by Kempke as shape type 37 (Kempke 1981). In Starigard/Oldenburg in Schleswig-Holstein, for example, Slavonic ceramics of type 37 are mainly dated to the period 1025 to 1090, but they occur both before and after these dates. This type of pottery occurs mainly between Wolin and Rügen in Mecklenburg, and historically the pottery has been referred to as belonging to the Fresendorf and Warder groups respectively (Schuldt 1956; Kempke 1988). The fact that pottery occurs on Rügen has contributed to Roslund's interpretation that the influence in Scania and the early Baltic ware culturally came from this specific area, which was inhabited by the Slavonic tribe the Ranes (Roslund 2001, 117, 248).

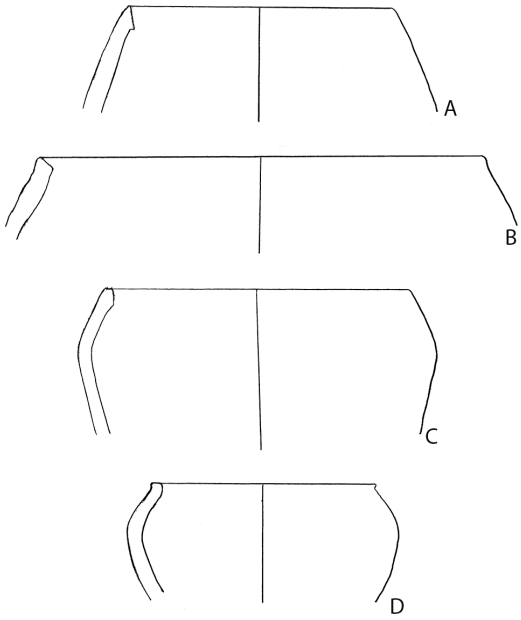

Fig. 4. Rim profiles of the Baltic ware from the Archbishops Cathedral. A-B) Pottery from layer beneath the coffins, F12, Lund D5 and D6. C) From a possible pit, depth 2.45 meter. F55, Lund D8. D) From a depth of 1.05 meter, F3, Lund D1. Drawings by the author.

The ceramics that emerged in the cultural layer at the Cathedral, which should have been older than the coffins from the 980s, consisted of a total of 11 fragments. Of these, two rim fragments were identified, and both were inturned, and they correspond to Roslund's shape type Lu 6 and Lu 1 (Fig. 4). The cultural layer completely lacks the typical southern Scandinavian Viking Age pottery that normally appears in Scania until the middle of the 11th century. There were no types of ceramics except Baltic ware in the oldest cultural layer on the site. It can thus be stated that if the stratigraphy and the drawings available from 1941–1942 are correct, the Baltic ware at the Cathedral, and thus in Lund, would be older than 980. The material is also relatively large, which shows that the pots were not the remains from one or several small pottery workshops, producing Baltic ware in Lund.

In summary, it can thus be stated that the type of Baltic ware found during the investigations at the Cathedral in Lund is generally dated to the 11th century, and mainly the first part. The Slavonic vessel type Warder, which may have been a model for it, is dated in Starigard/Oldenburg from around 975, but it was most common during the period 1025–1090 (Kempke 1988, Tab. 1). The Fresendorf ceramics have a much earlier dating, and the earliest evidence has been dated to the end of the 700s (Brorsson 2010, 27) while the type remained in large production numbers into the 900s (Schuldt 1956, 30). There is thus a basis for interpretations of the Baltic ware from the Cathedral being older than the latter part of the 10th century, but how early cannot be determined. An important contribution to the discussion about Baltic ware on site is the provenance of ceramics and whether the vessels were made in Slavonic territory or in Lund and Scania.

The developments on the other side of the Öresund seems to have been somewhat different from the introduction of Baltic ware in Scania. During the Medieval period, Lund and Scania was part of the Danish kingdom, and in other parts of Denmark there are abundant finds of Slavonic pottery in different parts of the country, which also includes Bornholm (Madsen 1991, 224 ff.; Vandrup Martens 2001, 119; Ulriksen 2018, 202 ff.; Naum 2008, 92). Sometime during the 900s the first Baltic ware appears in present Denmark, including Bornholm, and it was mainly vessels that had similarities to the Slavonic ceramic type Menkendorf, and this type of ceramic occurs only sporadically in Scania, and is almost completely absent in other parts of Sweden. The Menkendorf pottery has been connected to the same region in Mecklenburg as the Slavonic tribe, the Obodrites (Brather 1993, 330 Abb. 5). The Obodrites controlled a territory that was situated west of the area where the Ranes were

in charge. This could be the most important reason why Menkendorf-pottery was more common in mostly Zealand and the southern Danish Islands than in Scania. It must be mentioned that the pottery during the 10th century on the island of Bornholm had more in common with the rest of Denmark than Scania (Naum 2008, 88). Naum has interpreted the introduction of Baltic ware on Bornholm as Slavonic potters who came to the island together with other immigrants from the western Slavonic area (Naum 2008, 133).

Analyses give answers about the provenance of the Baltic ware

Altogether 11 sherds of Baltic ware from the Archbishop's Cathedral and from the excavation at kv. Saluhallen were sampled for analysis. The sample selection was primarily focused on pottery from the earliest layers at the Archbishop's Cathedral and from two pit houses at the kv. Saluhallen excavation, which is about 250 metres west of the Cathedral. The selection of ceramic fragments consists of vessels with inturned rims and the decoration on the body of the vessels consists of wavy-lines, horizontal lines and different impressions. Based on the fabric and the vessel shape, the pots may be interpreted as locally made in Scania, but in order to determine the origin of the former vessels, chemical analyses are required.

Inductively Coupled Plasma Mass Atomic Emission Spectrometry (ICP-MA/ES) was used to determine the chemical composition of the various fabrics, a standard method in ceramic analysis (Thompson & Walsh 1989). Using this method enables us to determine 44 non-organic elements which are subsequently utilized to discriminate the individual samples into distinct reference groups. A minimum of 0.3 g, taken from the pottery sherds, is

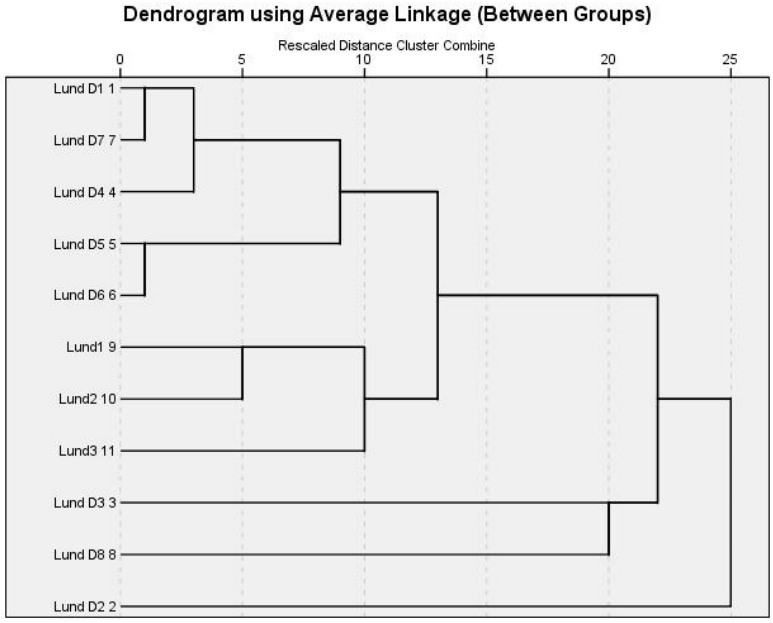

Fig. 5. ICP-MA/ES analyses of 11 sherds of Baltic ware from the Archbishop's Cathedral (Lund D1-D8) and the kv. Saluhallen excavation (Lund 1-3). Three vessels seem to have been made at other places than Lund.

ground into a fine powder which is dissolved in acid solution. The solution is then injected into argon plasma and when the atoms are targeted with this massive energy the electrons will produce coloured rays which are unique to every single element. The spectrum of atomic emission can subsequently be measured through AES. From the 44 elements measured, 12 will be used to determine the basis for the analysis. The following post-transition metals are included: aluminium (Al), chrome (Cr), gallium (Ga), manganese (Mn) and vanadium (V). The alkaline earth metals: calcium (Ca), magnesium (Mg), strontium (Sr). The lanthanides: cerium (Ce) and lanthanum (La). The alkaline metal: Sodium (Na) and finally the transition metal, cobalt (Co). The massive amount of data is processed in the software SPSS statistics which generates cluster analysis and dendrogram. The ICP-analyses were carried out at OMAC-laboratories, Loughrea in Galway, Ireland.

The statistical program SPSS have grouped the sherds according to the chemical composition and the results are showed as dendrograms, which gives a visible picture of the total analyses. Without a reference material the ICP analysis only indicates which sherds are equal and which ones are not. Therefore, a significant comparative material has been included in the study, including ceramics from other sites in Southern Sweden, but also material from Northern Germany, Denmark and Poland. This comparative material includes both sherds from settlement deposits and those that stem from ceramic kilns or represent other debris of pottery production.

The analysis shows that the Baltic ware from the two excavations can be divided into several smaller groups. The top five sherds in the dendrogram (Fig. 5) have probably belonged to the same ceramic production and all the sherds have belonged to vessels found at the Cathedral. The two sherds that have been found in the oldest layer, i.e., from the 970s, are the sherds Lund D4 and Lund D5. These two are not identical, but the vessels probably originate from two different productions situated in or close to Lund. In the middle of the dendrogram, the three analysed fragments from kv. Saluhallen (Lund1-3) form their own group and this clearly indicates that the ceramics from the two different excavations, which were approximately 250 meters apart, belonged to two different manufactures. Whether the ceramics are contemporary or not, the raw materials have not been collected in the same area, indicating we are dealing with traces of different workshops in Lund. At the bottom of the dendrogram, the sherds Lund D3, Lund D8 and Lund D2 form three different groups that probably represent the same number of productions, and these are most likely not from Lund (Fig. 5). The three fragments have therefore been compared with ceramics from northern Germany and Poland and there are no similarities with ceramics from these areas. The ceramics from Lund have also been compared with ceramics from different parts of present-day Denmark and there are no similarities here either. The ceramics from Lund were then compared with ceramics from other settlements in Scania— from early medieval villages in Lockarp and Västra Skrävlinge outside Malmö, Nedraby, Lilla and Stora Köpinge near Ystad, and with the medieval town of Tommarp near Simrishamn in eastern Scania. It can be stated that the sherds Lund D3 and Lund D8 are located together with ceramics from Lilla and Stora Köpinge outside Ystad (Fig. 6), and these two vessels were most likely made by potters who lived in southern Scania. The sherd Lund D2, on the other hand, is located together with ceramics from Västra Skrävlinge and Lockarp in the Malmö area (Fig. 5). Based on the analysis, it seems likely that the analysed vessel from the excavation at Lund Cathedral was manufactured outside Malmö and possibly in the vicinity of the kungalev (royal manor)

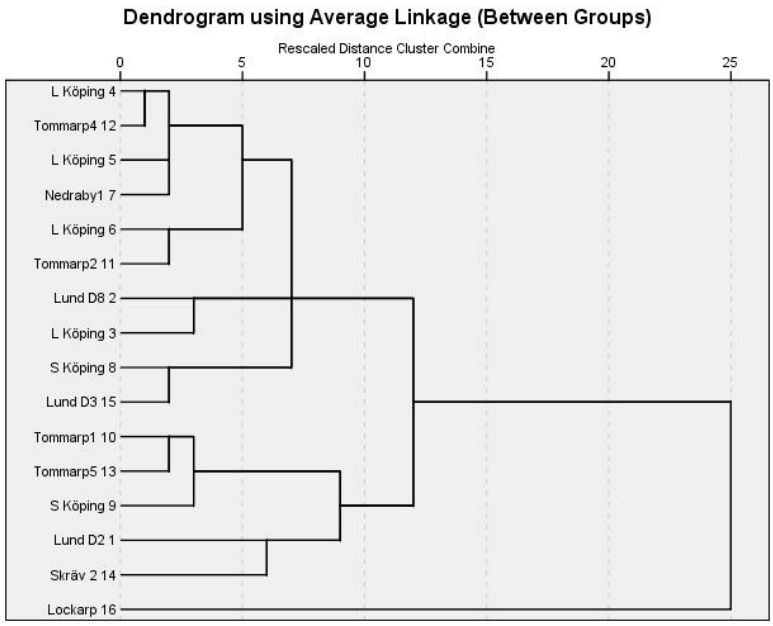

Fig. 6. Three of the vessels from the Cathedral have been manufactured in the Malmö area and in south-eastern Scania, respectively.

Oxie. Previous thin section analyses of Baltic ware from the kungalev Oxie dated to the beginning of the 11th century have shown that Baltic ware was probably produced there and that it may have been freed slaves from Northern Germany or Poland who were the potters (Jönsson & Brorsson 2004).

The analyses of the Baltic ware from the Cathedral and from kv. Saluhallen in Lund thus show that there were different workshops present in the city, but there was also an exchange between Lund and the kungalev at Oxie and with south-eastern Scania.

Locally produced Baltic ware from different parts of Scania

The analyses have demonstrated that the Baltic ware from both the Cathedral and kv. Saluhallen were manufactured locally, but that one vessel came from the Malmö area and two others from south-eastern Scania. None of the vessels have been made in Slavonic territory. The ceramics belonged to a southern Scandinavian tradition where Baltic ware was dominant. Based on finds in Lund, but also from parallels with Slavonic pottery from northern Germany and Poland, the vessel shapes that occur can, at the earliest point in time, be dated to the end of the 10th century. The oldest coffins in the study area must have been buried in the 980s, and stratigraphically, the coffins overlay a cultural layer with only Baltic ware, and this makes it probable that the ceramics should be dated to the 970s. What is surprising is that there is a complete lack of Viking Age AIV ceramics in the layer and that the ceramics are similar to Baltic ware that can be dated into the 11th century.

In the discussion of the oldest pottery in Lund, one of the strangest finds in Lund must be mentioned. It consists of ceramics tempered with seashells, so-called muschelgrusware. The sherd was found on the kv. Clemens 9 (Kulturen i Lund no.

Fig. 7. The two analysed Baltic ware sherds from the deepest layer at the Archbishop's Cathedral, dated to the 970s. Photo by the author.

71839), but unfortunately it was found without a secure context. This type of ceramic is normally dated to the 700s and 800s and it occurs on the German and Dutch North Sea coasts (Steuer 1979, 25), but the ceramics that are tempered with seashells can also be found as shelly ware in England, where it is dated from the 9th to the 12th centuries (McCarthy & Brooks 1988, 179 ff.). In Hedeby, however, this type of pottery has also been found in layers dating to the 10th century (Steuer 1974, 152). Based on the shape of the sherd and the structure of the fabric, it is most likely that the sherd from the kv. Clemens 9 can be classified as *muschelgrusware*. Given the general dating of this ceramic type, it seems less likely that the sherd in Lund was deposited during the 11th century, but rather during the 10th century. All in all, it shows that during the 970s there may have been some kind of settlement at the same site as the later Cathedral and at this time only Baltic ware was produced in Lund. Despite the fact that research on Baltic ware has made great progress since the 1990s, there are still a lot of question marks.

For example, it is important to explain why, and how rapidly, Baltic ware became so important in Lund and how long it took before it spread to other places in Scania. We can also see that there are some differences between various locations in how the Baltic ware was shaped and how large the proportion of Viking Age AIV ceramics there was. The insignificant element of AIV ceramics in Lund is an important detail to note, which is the opposite in, for example, Löddeköpinge, where the type of ceramics was very common. In both Löddeköpinge and Mölleholmen, close to Sjöbo, the vessels were dominated by what some scholars has classified as Baltic ware, but there were also pots that could be classified as Slavonic. On the other hand, the Baltic ware dated to the beginning of the 11th century from places like Oxie and Lockarp outside Malmö seem to have been of the same type as the ceramics from Lund. However, an important detail that separates the places around Malmö and the ceramic from Lund is the abundant presence of Viking Age AIV ceramics in the places around Malmö. Possibly this occurrence should be seen as a chronological marker, where most of the pottery is older than the 1000s. It may also have been social and cultural factors that influenced the inventory, especially in Lund, where for various reasons the inhabitants did not want, or were not allowed to use, the older Viking Age AIV ceramics, which had its roots in another society. However, there are pieces of evidence for at least one local production of AIV ceramics at the kv. S:t Mikael 16, but this could be the only one in Lund.

The development and introduction of Baltic ware in present-day Denmark seems to have taken place in a different way from Scania. The Menkendorf pottery, which was connected to the Slavonic tribe of the Obodrites appears in a number of different places in Zealand, Funen, and Jutland, and not least on Bornholm, and this style of pottery is then transformed into Baltic ware. In Scania, there are also a few settlements from the 10th century with Menkendorf pottery, but it is not this kind of ceramic that becomes the model for the Scanian Baltic ware. Instead, it was likely the Warder pottery of the West Slavic Rani tribe that stood model for the Scanian Baltic ware. The Scandinavian Viking age AIV ceramics may also stand as a precursor to the Baltic ware since there are similarities in shape between the most common vessel type of AIV pottery and the earliest Baltic ware in Scania (Brorsson 2000, 210). The finds of Baltic ware produced in the Scanian countryside, which could have been from the time before the 980s, indicate that there was an embryo for the large amount of Baltic ware that was produced later in Lund. The finds of Baltic ware from likely the 970s at the Cathedral indicate that the ceramics

can most likely be dated somewhat earlier than Lund's founding.

During the 11th century, there are places such as Mölleholmen, Stora and Lilla Köpinge and Löddeköpinge that have elements of Slavonic ceramics and this may well be the traces of people from the Slavonic area, but these were in minority. The Baltic ware that came to be manufactured in Lund has similarities with Baltic ware throughout Scania, Blekinge and southern Halland. The Baltic ware tradition in East Zealand was later transformed in such a way that it came to resemble the Baltic ware from Lund. The ceramics show that Scania came culturally closer to Zealand during the early 1000s. A future research task is to focus on ceramics from the second half of the 10th century and try to determine how early the Baltic ware actually is, and it could have been produced as early as the 950s. This research task should also involve discussions about the presence of the Viking Age AIV ceramics in Lund and in the villages in the countryside. The proportion between the large amount of Baltic ware and the few sherds of Viking Age AIV ceramics in Lund may reflect other things than just ceramic vessels and their functions. Perhaps the production was regulated by an authority that mandated that the people in early Lund to use Baltic ware and that they were not allowed to use the Viking age AIV ceramics.

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