

Red-Painted and Glazed Pottery in Western Europe from the Eighth to the Twelfth Century

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I. INTRODUCTION

by J. G. HURST

IN the Mediterranean area pottery has been decorated with a red-painted slip from neolithic times. During the Roman period red-painted wares were made in NW. Europe, including England and the Rhineland. In England the technique did not appear again until the late medieval period, but in the Rhineland red-painted wares, made at Badorf and Pingsdorf, became a major industry from the 9th and 10th century onwards. Lead-glazed pottery was first brought to NW. Europe in the Roman period and was made in England, France and the Rhineland. There was a clear break in production in the Rhineland until the 14th century, but lead-glazed pottery was reintroduced to England in the 9th century, and to the Low Countries by the 11th century.

The basic question about the origins of these red-painted and lead-glazed wares in NW. Europe in the 9th century is whether there was continuity from the

Roman period or whether both techniques were lost during the migration period and reintroduced in Carolingian times. In England and the Low Countries there was undoubtedly no continuity of either technique, but the position in Germany and France is less clear, especially with regard to red-painted wares. Until recently very little thought has been given to this problem.

The origin and date of the reintroduction of lead glaze to England are important for our understanding of late Saxon pottery. Red-painted wares were never made in England in the late Saxon period, but the Rhenish red-painted Badorf and Pingsdorf wares were imported into this country at a crucial period of change from middle Saxon to late Saxon forms and techniques. It is vital, therefore, to know exactly when the manufacture of these wares started in the Rhineland. The evidence for imports of middle and late Saxon pottery into England from the Rhineland was first summarized by G. C. Dunning in 1956,¹ in an article in which he discussed the Mayen, Badorf and Pingsdorf industries, and illustrated the type forms. The subject was further discussed at the conference on Anglo-Saxon pottery which was held at Norwich in 1958 under the auspices of the Council for British Archaeology, and the report on that conference contained illustrations and distribution-maps of the main types of Rhenish imports found in England.² Following my first meeting with Professor F. Tischler at this conference I visited Germany during the early 1960s on several occasions at his invitation to see the centres of pottery manufacture.

I was surprised to find on the surface of the kiln sites at Badorf not only typical Badorf ware but later Pingsdorf and blue-grey Paffrath wares. At Mayen and Pingsdorf pottery of widely different dates was easily collected. This shows the danger of naming pottery groups after type sites, although it is useful as long as it is realized that Badorf ware was not the only ware made at Badorf, nor Pingsdorf ware the only ware made at Pingsdorf. Pottery continued to be made in all these centres for many centuries; in addition there is not one Badorf ware or Pingsdorf ware but many different fabrics made at different kilns. Little of this has been properly studied, but a start is now being made and some of the problems are discussed by U. Lobbedey (pp. 121 ff.).

DATING

My second surprise was to find that the close dating for the change from Badorf to Pingsdorf ware in the 9th century, about which I had read, could not be substantiated. In fact, as Lobbedey shows (p. 123 f.), the earliest certain date for the production of Pingsdorf ware is 960, although other pieces of accumulated evidence suggest it was already being made by 900 or a little before. In Germany, then, as in England, very few of the generally accepted dates are firmly based. A circular argument has arisen by which English sites have been dated 9th century on continental evidence, while abroad English dating has been used to confirm 9th-century suggestions. This has led to very serious mistakes in the study of glazed wares (see below, p. 130).

¹ Dunning (1956). For key to shortened references see Bibliography, p. 146 f.

² Dunning (1959), pp. 49-77.

In England evidence for the change from middle Saxon Ipswich ware to late Saxon Thetford ware (and the other associated groups at St. Neots, Stamford, Torksey, Lincoln, Leicester, York and Chester) depends entirely on finds from Ipswich. Here S. E. West has demonstrated that, at the time of change to better made wheel-thrown wares, there were no imports of Pingsdorf ware, only of earlier Badorf and Frankish types.³ Lobbedey shows that the manufacture of Pingsdorf ware is more likely to have started nearer 900 than 850. This might suggest a slightly later date for the change in England than has previously been proposed.⁴ If the change took place *c.* 850, this would place it firmly before the Danish invasions. If it was later (*c.* 875), there would be a strong probability that, if not actually brought by the Danes (which would be rather unlikely since they lacked good quality pottery), it might have been one of the results of the settlement and the consequent increase in trade across the North Sea. There seems to be little doubt that in the late 9th and early 10th centuries Danish influence was one of the main driving forces in spreading high quality pottery throughout the area of the Danelaw and helped to set up pottery industries in the five Boroughs,⁵ although recent finds of Chester ware throughout Mercia may modify this picture.⁶ The state of knowledge is still too imperfect on both sides of the North Sea to answer these questions; the position is in fact much more complex and uncertain than was thought ten years ago. On the whole I am still inclined to think that Thetford ware first appeared at Ipswich *c.* 850, but that the other centres may not have started manufacture until after the Danish invasions. The exact dating will, however, always be difficult to prove.

ORIGINS OF RED-PAINTED WARE

The third result of my trips abroad was the realization that no one in Germany or England seemed to have investigated the origin of the red-painted slip decoration on Pingsdorf ware. It is possible that there was continuity in the Rhineland from Roman times and Lobbedey quotes some of the finds which have been produced to fill the gap (pp. 124 ff.). I found that Tischler was very doubtful about this and felt that the gap was still too great to prove continuity. While in Spain he was struck by the presence of dark-age red-painted pottery, especially in the area of Palencia, and therefore suggested that the idea of red painting

³ S. E. West, 'Excavations at Cox Lane, Ipswich (1958)', *Proc. Suffolk Inst. Archaeol.*, xxix (1963), 233-91.

⁴ G. C. Dunning, 'The imported pottery', *op. cit.* in note 3, pp. 279-86.

⁵ Lincoln ware has not yet been fully defined, but see J. G. Hurst, 'Late Saxon pottery' in A. Small (ed.), *The Fourth Viking Congress* (Aberdeen, 1965), p. 221. For Stamford ware see Hurst (1957). Splashed ware was presumably made in Nottingham or its vicinity; for bibliography and corrections to previous references see J. G. Hurst, 'Saxon and medieval pottery from Kirby Bellars', *Trans. Leics. Archaeol. and Hist. Soc.*, xliii (1967-8), 15, though there is as yet no evidence for an early date. Leicester ware has recently been defined and wasters found: M. G. Hebditch, 'A Saxo-Norman pottery kiln discovered in Southgate Street, Leicester, 1964', *ibid.*, pp. 4-9. A distinctive brown sandy ware, finer than Chester ware, has recently been identified by G. Beresford at the deserted medieval village of Barton Blount (Derbys.). This could well have been made at Derby.

⁶ Chester ware has now been found in large quantities at Hereford as well as at Tamworth and Chester itself: *Current Archaeol.*, 1 (1968), 244; F. Noble and R. Shoesmith, 'Hereford city excavations, 1967', *Trans. Woolhope Nat. Field Club*, xxxix (1967), 44-70.

travelled northwards through France from Spain and became established in the Rhineland. At the time the main difficulty about this theory was the lack of early material in France. There is still a gap in SW. France, where most of the red-painted wares seem to be late, but the important recent work at Beauvais, described by M. de Bouard (p. 113 f.), demonstrates that there is early red painting in France. It now seems very likely that the earliest red-painted Badorf ware (Hunneshans ware) with its vertical painted strokes, may have come from France. Early French examples and the Zelzate costrel (see below, p. 107 f.) from Belgium seem to be very closely linked. As the red-painted ware in Spain is similar it may also be linked, although Spanish scholars think in terms of the idea coming the other way (see below, p. 135). This seems unlikely in view of its apparent earlier dating in Spain.

As with glazed ware (see below, p. 141) D. B. Whitehouse has demonstrated the presence of 8th- and 9th-century red-painted wares in Italy which could be ancestral to Badorf and Pingsdorf,⁷ although it must be made clear that it is only the idea of painting which seems to have travelled; none of the shapes are the same. It is perhaps more likely that red painting came to the Rhineland from Italy through France, and possibly through S. Germany as well, by the same route as will be suggested for early glaze (see below, p. 97).

ORIGINS OF GLAZE

Pre-conquest lead-glazed pottery belonging to the 10th and 11th centuries was first recognized in England by T. C. Lethbridge and C. F. Tebbutt during the 1930s,⁸ but it was not until after the last war that this early dating was generally accepted as a result of stratified finds at Thetford⁹ and Oxford.¹⁰ Many finds during the past twenty years have confirmed the pre-conquest dating and shown that the industry was based on Stamford, but there is only circumstantial evidence that any of this pottery was made before 900 and there are still no firmly dated early sites in the Stamford region itself. Most of the datable sherds have been found at sites to which this pottery was traded.

The finds of Stamford ware at Thetford were made by G. M. Knocker soon after the publication of R. B. K. Stevenson's report on Byzantine pottery of a similar date.¹¹ Stevenson suggested to Lethbridge that 'because of the technical similarities, this early English glaze was derived from that of Constantinople', and this view was published by Lethbridge in 1949.¹² In 1954 D. Talbot Rice published a survey of recent discoveries of Byzantine pottery¹³

⁷ Whitehouse (1966).

⁸ Finds listed in Hurst (1957), pp. 37-8.

⁹ Dunning (1949), where the finds were first announced. See also 'Anglo-Saxon glazed pottery', *Archaeol. News Letter*, II (1949), 42.

¹⁰ E. M. Jope, 'Late Saxon pits under Oxford Castle mound: excavations in 1952', *Oxoniensia*, xvii-xviii (1952-3), 96.

¹¹ Stevenson (1947).

¹² T. C. Lethbridge, 'Byzantine influence in late Saxon England', *Proc. Camb. Antiq. Soc.*, XLIII (1949), 2-6.

¹³ D. Talbot Rice, 'Byzantine polychrome pottery: a survey of recent discoveries', *Cahiers archéol.*, VII (1954), 69-77.

bringing up to date part of his original publication of 1930.¹⁴ In the same volume Stevenson set out his views on the Byzantine inspiration of English medieval glaze, and of Stamford ware in particular.¹⁵

In 1956 Dunning first called this late Saxon pottery in England Stamford ware¹⁶ and, in the same article, drew attention to the Dutch pottery with 'sparse glaze'.¹⁷ As it was thought at that time that the Dutch finds were earlier than those from England, he suggested that the glaze came to England from Holland in the 9th century, at the same time as other types of late Saxon pottery were introduced into Britain and made at the new centres of St. Neots and Thetford. I followed this interpretation when I summarized the evidence for Stamford ware.¹⁸ During my tours of continental museums and discussions with foreign scholars in the early 1960s, I found that the early dating in Holland was not at all secure and was not accepted by post-war workers on the subject. H. H. Van R. Altena and F. Verhaeghe summarize the present evidence from Holland (p. 130) and Belgium (pp. 108 ff.). It looks as though glazed pottery in both England and the Low Countries was introduced from France, since there is increasing evidence for early glaze in France; the latest position is summarized by de Bouard (p. 118 f.). Dunning in fact originally suggested this in 1949,¹⁹ although the early date of two sites that he mentioned (St. Genis-Hiersac and Canet) cannot be substantiated (see below, p. 115).

More recent work in Italy by Whitehouse has demonstrated that glazed pottery (Forum Ware) was common in central Italy in the 8th and 9th centuries²⁰ and to that extent it provides a geographical step towards western Europe from Byzantium. There was never any glazed pottery in the Rhineland in Carolingian times. Although there are a few scattered finds on the upper Rhine which are discussed by Lobbedey (pp. 126 ff.), new discoveries point to the glazed wares in England and the Low Countries being derived from Byzantium by way of Italy and France. At present the only early evidence for glaze in southern France and in Spain is Islamic but, as only two years ago it was thought there was no certain Carolingian glaze in central or northern France, there may well be other discoveries in the next few years. As it seems very probable that there was gradual dissemination northwards through France rather than a sudden leap to NW. Europe, clearly the route must now be established.

The problem of whence glaze reached Byzantium itself is again a vexed question. Recent work in Istanbul suggests that there was no glaze between the 5th and 8th centuries. Whitehouse suggests (p. 142) that glaze was re-introduced into Byzantium from the Near East, where continuity is clearly demonstrated. Stevenson, however, has argued for both 5th- (now perhaps 6th-)

¹⁴ D. Talbot Rice, *Byzantine Glazed Pottery* (Oxford, 1930).

¹⁵ Stevenson (1954).

¹⁶ Dunning (1956).

¹⁷ Dunning (1956), pp. 227-8. 'Sparse glaze' is a misleading translation as it suggests uneven and thin glaze while it is in fact thick but only covers part of the pot. It is suggested that 'partially glazed' would be more appropriate. The sparse glaze of Italy (see below, p. 142) which is really sparse adds to the confusion.

¹⁸ Hurst (1957), pp. 41-2.

¹⁹ Dunning (1949), p. 2.

²⁰ Whitehouse (1965).

and 8th-century glaze at Constantinople²¹ and has claimed that the technical characteristics of Stamford ware, common in 9th-century Byzantine pottery, are not found in Islamic pottery, although Islamic lead-glazed wares also underwent rapid development at the same period (see also below, p. 144 f.).²²

In view of these new finds and ideas, Tischler and I decided to try to bring together the opinions of different scholars in the countries concerned. It is greatly to be regretted that although Professor Tischler was concerned in the original discussion of the plan and the choice of contributors, he did not live to see his ideas come to fruition. His death has also unfortunately delayed publication, though the subject is now moving so fast that new finds may at any time transform the position (as in fact have the discoveries of red paint and glaze in France in the last two years). For this reason I have not altered the sections which follow but have allowed contributors to state their views about the problem as it appears to them in their own countries. It is hoped that this symposium will stimulate more work on the date and origins of red painting and glaze in western Europe in this important period when so many different influences seem to have been at work. I have placed Tischler's contribution first, since it was his stimulating ideas which initiated this study. This is followed by contributions from other countries in alphabetical order, closing with general comments by Whitehouse on the Mediterranean background, including important new work since his articles on glazed and red-painted wares appeared in 1965 and 1966, and Stevenson's present thoughts fifteen years after his valuable contribution to the problem of the origin of Stamford ware.

²¹ Stevenson (1947), pp. 32 and 34-5.

²² Stevenson (1954).

II. PALENCIA—PINGSDORF—BYZANTIUM (FIG. 38)

by the late F. TISCHLER²³Sometime Director, *Niederrheinisches Museum, Duisburg, Germany*

When I first saw the finds from the Thetford excavations²⁴ at the Castle Museum, Norwich, in 1952, my English colleagues, G. C. Dunning, G. M. Knocker and R. R. Clarke, pointed out the resemblances between Thetford ware and the Carolingian pottery of the Rhineland. At that time we all agreed that without knowledge of Rhenish pottery the Thetford-ware types could hardly have been conceived. On the other hand it was quite clear that the clay for this East Anglian pottery must have come from Thetford or near by. The chronology and origin of the site was at that time not clear, but it is now thought likely that the manufacture of these Saxo-Norman wares started about the middle of the 9th century. The most interesting fact was that amongst the pottery there were some pale green, yellow and orange lead-glazed sherds.²⁵ Since my visit in 1952 it has been discovered that this pottery was made in Stamford and it has become clear that the answer to the question of its origin is very important for students in the Rhineland, because, as is not always realized, the problem of the origin of glaze is closely connected with that of red-painted Pingsdorf ware. Both techniques, glazing and painting, are obviously to be seen in relation to a wide background of Mediterranean tradition, and both were known in the Roman period. It is necessary, therefore, to see whether the wares of the late 4th and early 5th centuries can be linked with those of the middle of the 9th century.

DARK-AGE POTTERY IN SPAIN

On visits to Spain it was instructive to find in local museums pottery which is very similar to Pingsdorf ware.²⁶ From Valencia to Elche and from Toledo to Palencia a buff fabric with a rough pimply surface caused by sand-tempering is found. This ware is painted with stripes ranging from red to brown. In most of the collections it is described as 'Arab pottery, 10th to 13th century'. It has now been shown that sites on the E. coast belong to the 4th and 5th century although the finds could possibly be a little later. On sites farther north this pottery belongs to various dates up to the end of the Visigothic period and even into the 8th century (see below, pp. 135 f.). As continuity from Roman times through the Visigothic period into the Arab empire was particularly impressive and well defined in the neighbourhood of Palencia, I chose the name Palencia for this uninterrupted

²³ Lecture delivered to the seventh International Congress of Prehistoric and Protohistoric Sciences at Prague, August 1966, under the title 'Palencia-Pingsdorf-Byzanz', and published in *Forschungen und Fortschritte*, XL (1966), 271-5. The present version was translated into English by Miss B. Tischler and edited by J. G. Hurst with certain changes to the text and footnotes.

²⁴ G. M. Knocker and R. G. Hughes, 'Anglo-Saxon Thetford', *Archaeol. News Letter*, II (1950), 117-22, and III (1950), 41-6; J. G. Hurst, 'Thetford ware', *Proc. Camb. Antiq. Soc.*, I (1956), 42-60.

²⁵ Dunning (1949).

²⁶ Böhner (1955-6).

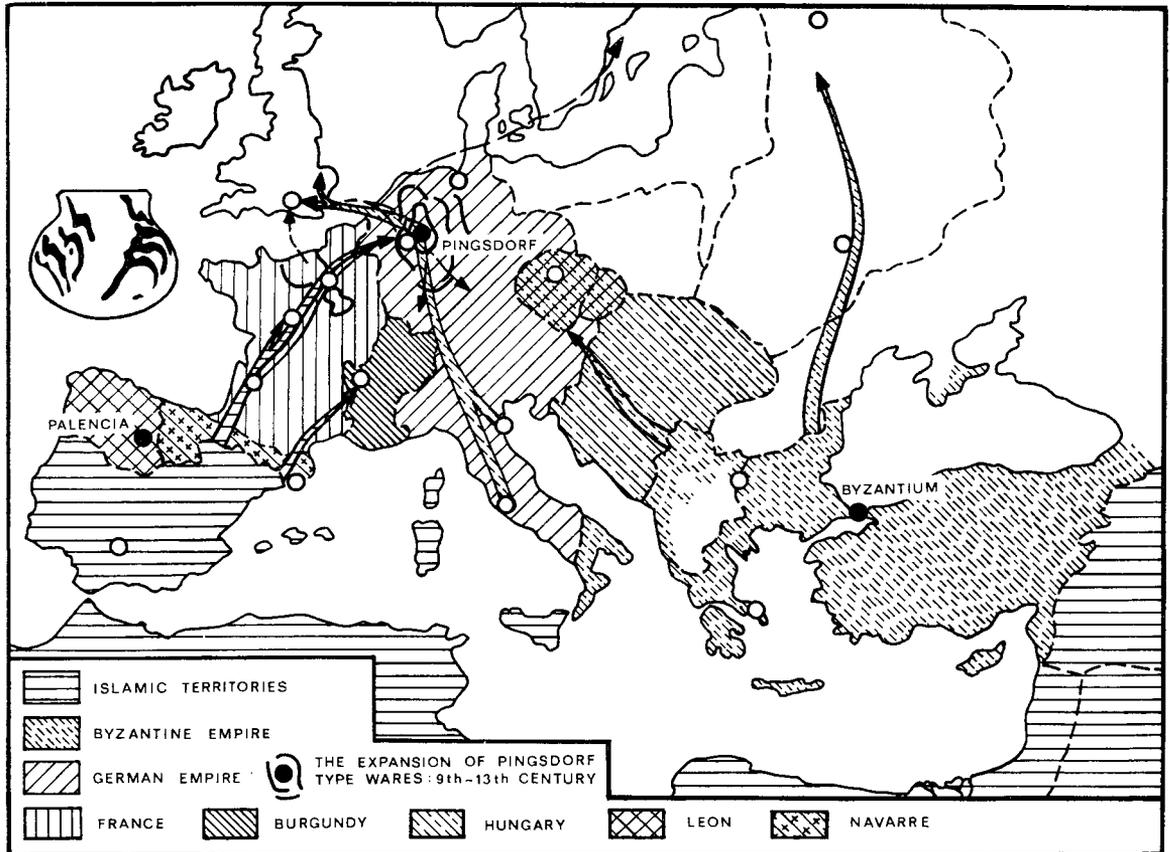


FIG. 38

MAP OF EUROPE c. 1000

showing possible routes of Mediterranean influence on Pingsdorf area of the Rhineland (pp. 99 ff.)

sequence. This stresses the fact that in Spain a clear survival of Roman methods which include the painting and glazing of pottery can be demonstrated. These two techniques reached new heights as many new influences reached Spain from Italy or Byzantium and later from Islam: there were always artists entering the country with fresh technical knowledge.

THE SPREAD OF SPANISH INFLUENCE

In the Visigothic period northern Spain and Aquitaine were closely connected.²⁷ The area between the Loire and the Ebro and even as far south as Toledo formed a cultural unity in which knowledge of late classical techniques

²⁷ H. Stern, 'La Mosaique de l'église Saint-Genès de Thiers', *Cahiers archéol.*, vii (1954), 185-98; A. Grabar, 'Les Mosaiques de Germigny-des-Près', *ibid.*, pp. 171-83; B. Brenek, 'Marginalien zum sog. Sarkophag des Agilbert in Jouarre', *ibid.*, xiv (1964), 95; W. Heil, 'Der Adoptionismus, Alkuin und Spanien' in W. Braunsfels (ed.), *Karl der Grosse, Lebenswerk und Nachleben*, II (Dusseldorf, 1965), 95-108.

had been retained.²⁸ After the Arab conquest of 711 when this Spanish and Aquitanian area became Arab territory, new influences reached the borders of the Frankish empire. Some came from the so-called Mozarabic world.²⁹ In the north this art style did not appear until the 2nd half of the 9th century. In the 8th century it reached Cordoba with all its unmistakable characteristics—a mixture of Roman, N. African and Byzantine influences. In Mozarabic art, ideas of the Ibero-Roman period survived whereas Byzantine and Visigothic art was, to some extent, transformed by Arab influences.

In 756 Abdarrahan I (756–88) founded the independent emirate of Cordoba. After this a Mozarabic style is easily recognizable at Toledo, Cordoba, Seville and Saragossa. Only one generation later, in 795, the Spanish March of the Carolingian empire took shape.³⁰ At first it was under the tutelage of Louis the Pious; Charles the Bald granted it full independence under Wilfredo El Velloso (874–98) of Barcelona. Refugees from the Moslem areas of Spain who had been settled by Charlemagne lived in the Spanish March. In association with Carolingian monasteries they created a very important culture and at the same time guaranteed protection from the Arabs. In this way Spain became an important intermediary for the influence of Moslem elements on Carolingian France. Typical of this transitional population was Theodulfus,³¹ who was born near Narbonne, and who ordered a church to be built at Germigny-des-Près, near Orleans.³² We know that he read Spanish manuscripts and that he was familiar with the art of the court of Cordoba. In these Spanish manuscripts oriental and eastern elements, originating in Syria and Mesopotamia, were linked. Experts sometimes recognize characteristics of Sassanian art combined with Moorish and Visigothic ideas. The Iberian peninsula was therefore a melting pot of the arts, and at the end of the 8th century was also connected with France in various ways.

One must now look far more to Spain for an understanding of how Mediterranean techniques came to the Rhineland. S. Corsten has shown³³ that part of the Rhenish nobility came from Aquitaine, which was the region most closely connected with Spain. There are many examples of Arab textiles with animal decoration (partly manufactured in Andalusia),³⁴ copper objects from Cordoba and bronze vessels from Persia reaching the Frankish empire as gifts. One of the

²⁸ P. Wolff, 'L'Aquitaine et ses marges', *ibid.*, I, 269–306.

²⁹ M. Gómez-Moreno, *El arte árabe español hasta los Almohades—Arte mózarabe* (Ars Hispaniae, III, Madrid, 1951); P. de Palol and M. Hirmer, *Spanien* (Munich, 1965).

³⁰ E. Cauvet, *Étude historique sur l'établissement des espagnols dans la Septimanie aux VIIIe et IXe siècles et sur la fondation de Fontponcouse au VIIIe siècle par l'espagnol Jean* (Montpellier, 1898).

³¹ R. Pfister, 'Les Tissus orientaux de la bible de Théodulf' in *Coptic Studies in Honor of Walter Ewig Crum* (Boston, 1950), p. 501.

³² P. Bloch, 'Das Apsismosaik von Germigny-des-Près' in *Karl der Grosse, op. cit.* in note 27, III, 234–61.

³³ S. Corsten, 'Rheinische Adels herrschaft im ersten Jahrtausend', *Rheinische Vierteljahrsblätter*, xxviii (1963), 84–129; K. F. Werner, 'Bedeutende Adelsfamilien im Reich Karls des Grossen' in *Karl der Grosse, op. cit.* in note 27, I, 83–142.

³⁴ J. W. Thompson, 'The introduction of Arabic science into Lorraine in the tenth century', *Isis*, xii (1929), 184. In Barcelona (Museo de Arte de Cataluña) there is a figure of Christ clad not in the usual loin-cloth of the crucified, but wearing the ceremonial gown of the Lord of the world. The long blue tunic carries a design of red circles each containing a single blossom, imitating early Islamic silk. At the hem of the gown there are copies of Arabic letters (*Du-Atlantis*, xxiv (1964), 4). In my opinion it would be valuable to investigate whether the letter-like painting which sometimes occurs on Pingsdorf ware may derive from a misunderstanding of Arabic letters.

best known missions was the embassy Charlemagne sent to Harun-al-Rashid. This delegation must have returned to Aachen in 801.³⁵ Political relations, religious connexions and the lively interchange of ideas between Spain and the Rhineland make it possible that the techniques of red painting and glaze reached the Rhineland in this roundabout way.

Archaeologists looked for the origin of painting and glazing in the west or south-west because the origins of Pingsdorf ware could not be traced in the south. This red-painted Carolingian pottery was exported mostly to Frisia and as far north as Haithabu.³⁶ Later copies of Rhenish pottery have been found on the River Meuse³⁷ and along the Channel coast.³⁸ To the south, Pingsdorf ware only reached the Alemanno-Frankish border in the area of Frankfurt.³⁹ A few sherds found near Strasbourg (see below, p. 124) and Basle⁴⁰ accentuate the lack of Pingsdorf ware in southern Germany. Not until the 12th century, at a time when Pingsdorf ware and its successors in the Rhineland were already being superseded by Siegburg wares, was a type of Pingsdorf ware made near Worms, in the central Main area, and in NW. Germany near Hanover.⁴¹ It has always been clear, however, that the red paint was applied to vessels whose forms were characteristic of the late Frankish industry.

THE SPREAD OF BYZANTINE INFLUENCE

Glaze and painting were, however, also known in Byzantium⁴² and used there over a long period. The Byzantine emperors and merchants knew how to fill Europe with their merchandise. As Byzantium also influenced artists of the Iberian peninsula, through Arab infiltration, this art and technique could spread east,⁴³ south, west, and north to the N. Alpine region.⁴⁴ The starting point for this spread of Byzantine taste and artistic trade was the exarchate of Ravenna. The export of Coptic bronze vessels from Italy to England⁴⁵ shows one of these trade

³⁵ In 807 the monks George and Felix came to Charlemagne on behalf of the Patriarch Thomas of Jerusalem together with a Persian envoy from Jerusalem (*Karl der Grosse, op. cit.* in note 27, III, 137); P. E. Schramm and F. Mütterich, *Denkmale der deutschen Könige und Kaiser* (1962), no. 104 of the catalogue by P. E. Schramm (the elephant silk in the treasury of the cathedral in Aachen, Byzantine, 10th century). According to the inscription, this silk was manufactured in the workshop of the Byzantine court, the products of which were for the exclusive use of the imperial family. The cloth was brought by Theophanu (died 991) or as a present for Otto III to the west; it is one of a number of 10th-century Byzantine silks which use and imitate Sassanian motifs and patterns.

³⁶ H. Jankuhn, *Haithabu* (Neumünster, 1956); Hübener (1959); A. E. Herteig, 'The excavation of "Bryggen", the old Hanseatic wharf in Bergen', *Med. Archaeol.*, III (1959), 177-86.

³⁷ A. Bruijn, 'Die mittelalterliche Töpferindustrie in Brunssum', *Berichten van de Rijksdienst voor het Oudheidkundig Bodemonderzoek* (hereafter *Ber. R.O.B.*), IX (1959), 139-88; Bruijn (1960-1); Bruijn (1962-3).

³⁸ Dunning (1959), pp. 62-71.

³⁹ Stamm (1962); reviewed by W. Hübener in *Germania*, XLII (1963), 420-4, with distribution-maps.

⁴⁰ L. Berger, *Die Ausgrabung am Petersberg in Basel* (Basle, 1963).

⁴¹ H. Plath, 'Mittelalterliche Keramik vom 12-15 Jahrhundert in Hannover', *Hannoversche Geschichtsblätter*, XII (1958), 1-39.

⁴² Stevenson (1947).

⁴³ A. Lane, *Early Islamic Pottery* (London, 1953).

⁴⁴ Grosso (1958), p. 20.

⁴⁵ J. Werner, 'Fernhandel und Naturalwirtschaft im östlichen Merowingerreich nach archäologischen und numismatischen Zeugnissen', *Berichte der Römisch-Germanischen Kommission*, XLII (1961), 307-46.

routes quite clearly. Another reached S. Russia, the Baltic and even Scandinavia⁴⁶ through the Black Sea ports. Byzantine influence can be traced from southern France along the River Rhône, down to the mouth of the Seine and across to England. It is therefore quite reasonable to ask whether painted Pingsdorf ware and glazed Stamford ware can be traced back to Byzantine prototypes. In the excavation report on the palace of the Byzantine emperors in Constantinople, Stevenson drew attention to a group of pottery which he called 'Bovril-painted ware'. This is a light-coloured fabric with a form of comma and striped painting under the transparent glaze. In this the first stages of the later style of red painting might be seen. Unfortunately this idea is not valid because of chronological difficulties; this Byzantine pottery most probably belongs to the 2nd half of the 9th century and to the 10th century, while red painting had already been adopted in the Rhineland by the middle of the 9th century (see below, p. 124).

It is also noteworthy that glaze was used at Thetford in the late 9th and early 10th centuries. Here it would be easy to think of connexions with Byzantium if it were not for the fact that English glazed white wares were produced at Stamford.⁴⁷ Examination of the clay demonstrates that it was undoubtedly of English origin. The term Stamford ware therefore refers to the clay and not to the origin of the technique of lead glazing. Lead glaze is also applied to local shapes. All we know at present is that this glaze must have been put on these native forms by foreign workers.

PAINTED AND GLAZED WARES IN N. EUROPE

We now know that pottery production south of Cologne is a northern example of an unbroken Roman tradition. At Mayen it was continuous from Roman times until the middle ages; at Trier it was interrupted. My Rhenish colleagues have shown that there were many typological developments from Roman originals to Carolingian forms. In the meantime J. G. Hurst has discovered that knowledge of red painting and glaze continued without a break, not only in Spain, but also in Italy (as well as in Byzantium). It is therefore necessary to find which area influenced which other area first and which was the most important.

Lobbedey describes (pp. 121 ff.) the distribution of German red-painted wares and the problems of dating. Red-painted Pingsdorf ware is the northern component of a continuous Mediterranean tradition. It could have come to the Rhineland from Spain by way of Aquitaine or from Italy by way of the upper Rhine. The routes are similar to those W. Holmqvist has described as taken by elements of Coptic art.⁴⁸ He showed that from the 6th century onwards, oriental

⁴⁶ K. Mijatev, 'Die mittelalterliche Keramik in Bulgarien', *Prähist. Zeitschr.*, xxxvii (1959), 219-26; F. Stein, 'Die goldenen Ohringe des reichen Mädchen-Grabes 139 von Linz-Zizlau', *Kunstjahrb. Linz* (1961), p. 5; J. Werner, 'Byzantinische Gürtelschnallen des 6. und 7. Jahrhunderts aus der Sammlung Diergardt', *Kolner Jahrb.*, II (1955), 36-48; C. J. Lamm, *Oriental Glass of Medieval Date found in Sweden* (Kungl. Vitterhets Historie och Antikvitets Akademiens Handlingar, I, Stockholm, 1941).

⁴⁷ Dunning (1956), pp. 228-31.

⁴⁸ W. Holmqvist, 'Einflüsse der koptischen Kunst in Westeuropa' in *Katalog Koptische Kunst* (Essen, 1963), p. 157.

(especially Byzantine) textiles, bronzework and belt-plates had been coming to the west. In the next period objects were produced with Merovingian, late classical and Coptic connexions of style. The Coptic bronze vessels of the 7th century in the N. Alpine region and the silver Anastasius dish from Sutton Hoo (Suffolk) show that old and new objects and techniques reached western Europe at the same time. Adoption of painting on native vessels is no problem, but glazing cannot be copied by native potters without difficulty. Foreign workers and slaves could have come to the upper Rhine or to England by many routes. In the towns⁴⁹ they must have exchanged so much knowledge and information that it is very difficult to define one starting point for the spread of techniques so well-known in the Mediterranean area.

At present there is evidence of the beginnings of Pingsdorf ware only in the area between Bonn and Cologne. The later pottery centres (in the northern part of the Eifel, then in Dutch Limburg, and farther north along the German and Dutch border) started manufacture mostly in the 12th century. These centres all stand on the River Meuse and it is probably not chance that they were part of the first great wave of 12th-century industrialization in this area.⁵⁰ At the same time production of pottery started at Siegburg, a centre which outshone all other potteries.⁵¹ The potters of Langerwehe and Raeren copied those of Siegburg so that as for Pingsdorf ware there was continuity of production.

Glaze did not appear until the 11th century.⁵² It is therefore most surprising that W. C. Braat found some glazed sherds in the defensive earthworks of Zeeland.⁵³ But perhaps these sherds should not be ascribed to the 9th century, as the excavator first thought (see below, p. 130). Certainly the published profiles are not of that date. But after the discovery of glazed sherds at Forstfeld on the upper Rhine there will undoubtedly be more surprises, and glazed pottery at Thetford, which is now mostly dated 10th century, would not then be as unusual as I have suggested above (p. 103). Compared with the results of English research, little is known about medieval pottery on the continent. Beside each larger castle or abbey there must have been many local potteries. Excavations at Xanten⁵⁴ confirm this.

Almost at the same time as the Meuse potters started production a kind of Pingsdorf rouletted ware appeared in France. This was published for England and France by Dunning.⁵⁵ The method of applying stripes with a thick brush is similar to that used on earlier pieces from Meschede. Other centres include

⁴⁹ E.g., men like Theophilus who had extensive knowledge of glass manufacture. He was possibly of Greek origin and lived in a monastery in Cologne c. 950. Earlier he had been in France. (But see C. R. Dodwell, *Theophilus, The Various Arts* (London, 1961) p. xviii, where a 12th-century date is suggested. J.G.H.)

⁵⁰ F. L. Ganshof, 'Das Hochmittelalter', *Propyläen Weltgeschichte*, v (1963), 395.

⁵¹ B. Beckmann, 'Der Scherbenhügel in Siegburg, Siegkreis, 2', *Bonner Jahrb.*, CLXIV (1964), 327-32.

⁵² Borremans and Lassance (1956).

⁵³ Braat (1960). Some of the profiles of the glazed pottery at Burgh are similar to those from Andenne although they are partially rather than completely glazed. Perhaps they were made at Aardenburg (Zeeland) and belong to the 13th century.

⁵⁴ W. Bader, 'Datierte Gefässe aus St. Viktor in Xanten', *Bonner Jahrb.*, CLXII (1962), 188-230; H. Hinz, 'Einige neiderrheinische Fundstellen mit mittelalterlicher Keramik', *ibid.*, pp. 231-59; Hinz (1965).

⁵⁵ Dunning (1959), pp. 62-71, with earlier references. See also G. Bernard, 'Fouilles de souterrains', *Bull. groupe archéol. Nogentais* (1963), p. 9.

Troyes.⁵⁶ The combination of rouletting painting could be compared, but it is certain that the French and English specimens belong to the period after 1066. At present we do not know whether potters in France imitated the Pingsdorf style or continued a Merovingian tradition, or whether there are, as at Trier, some gaps in the tradition. But there are no centres for production of 'French/Pingsdorf' south of the River Loire. In Aquitaine a different development resembled more the Mediterranean kind of forms and patterns.⁵⁷ Vessels from Bordeaux have been found in England not only because of the wine trade and because this region belonged to England during the middle ages; there have always been other opportunities to send pottery from one country to another. In the year 1114 Matilda, daughter of Henry I, married the German king, Henry V. If Pingsdorf ware is found in London after 1114 it is useful to remember this historical fact. Between 1128 and 1150, too, many Cistercian monasteries were founded in England.

In the title of this section I used the name Pingsdorf linked with those of Palencia and Byzantium to emphasize that the Cologne district, besides its situation on the fringe of the Christian world, belonged to a late classical tradition, which again reached the limits of the former Roman empire.

⁵⁶ J. Daune, 'Un four de potier médiéval découvert à Rummilly-les-Vaudes', *La Vie en Champagne*, ciii (1962), 3.

⁵⁷ K. J. Barton, 'The medieval pottery of the Saintonge', *Archaeol. J.*, cxx (1963), 201-14.

III. BELGIUM

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The problems of the origin of glaze and of red-painted decoration on the so-called Pingsdorf wares have still not been solved, partly because medieval pottery has not been sufficiently studied in some parts of NW. Europe, such as France and Belgium. The purpose of this short note is to present the Belgian evidence.

DEFINITION OF TERMS

The whitish, creamy or even yellowish pottery, with red-painted decoration on the upper part of the body, is mostly referred to as Pingsdorf ware. This term indicates both the ware and its origin, i.e. the kiln or area where it was made. However, recent research has shown that pottery with red-painted decoration was also made at other places as well as Pingsdorf. It was produced in Dutch Limburg⁵⁹ and at a later date a different type of red-painted pottery, which can certainly not be described as Pingsdorf ware, was made in Normandy (see below, p. 114). We may reasonably expect other kilns to be discovered. The term Pingsdorf ware, therefore, should only be used to describe red-painted pottery undoubtedly made near Pingsdorf. Mineralogical analyses, as well as typology, can help to determine where the pottery was made. If the origin of a red-painted pot or sherd is unknown, I suggest the use of the terms 'red-painted pottery' or 'Pingsdorfer Art' or 'Pingsdorf-type ware', thus indicating the ware without implying its origin (see below, p. 121 f.). The same applies to the term 'Andenne ware', which is now commonly used to describe partially glazed pottery (see above, note 17) of which the fabric is creamy or pink in colour. This kind of pottery was made not only in the Andenne area, but also in Dutch Limburg, and elsewhere (see below, p. 131 f.), and for such products the term 'Andenne-type ware' or 'partially glazed ware' seems preferable.

ORIGINS OF RED-PAINTED WARE

The problem of the origin of the red-painted decoration on Pingsdorf-type wares may be closely related to the problem of the origin of early glaze. However, before drawing any general conclusions, both have to be discussed separately. According to several distribution-maps,⁶⁰ Pingsdorf-type wares seem to be far less well represented in Belgium than in the Netherlands or Germany. Nevertheless, more and more red-painted pottery is being found in Belgium: Harelbeke, Grobbendonk, Werken, Ostend, Lichtaart, Mechelen-aan-de-Maas, Huise,

⁵⁸ Flemish text translated by F. Verhaeghe and edited by J. G. Hurst.

⁵⁹ At Brunssum, Schinveld and Nieuwenhagen. In Brunssum and Schinveld glazed pottery was also produced (see below, p. 131 f.).

⁶⁰ Hübener (1959), p. 130; Dunning (1968), p. 36, fig. 1.

Oosterke, Ghent, Eename, Antwerp,⁶¹ Destelbergen,⁶² Tongeren, Grimbergen,⁶³ Leut, Achel,⁶⁴ Raeren-Eynatten,⁶⁵ Bruges.⁶⁶ Two of these sites, Antwerp and the count's castle in Ghent, yielded a quantity of red-painted pottery. As interest in the subject grows, more will be found.

However, two important conclusions can be drawn from the available evidence. First, it seems that in Belgium, or in the southern part of the Low Countries, red-painted pottery occurs less sporadically than was generally believed. This could change the pattern of distribution, especially if the material from NW. France should present a similar density. Second, among the finds mentioned above, those from Leut and Achel, in the province of Limburg, can probably be identified as products of the Brunssum and Schinveld kilns. It is not impossible that one of the red-painted sherds found at Destelbergen, near Ghent, comes from the same source. On the other hand, it is likely that the Pingsdorf kilns exported red-painted pottery to Flanders. Some of the pottery found at Antwerp and in the count's castle of Ghent is undoubtedly genuine Pingsdorf ware.

It is worth mentioning also that among the Antwerp finds there are some fragments of so-called Hunneschans ware (see below, p. 124), i.e. pottery with Pingsdorf-type decoration and with the rouletting typical of Badorf ware. Most of these sherds seem to belong to pitchers very similar to those from Badorf, as far as form and fabric are concerned. From what we know of this group a date in the 2nd half of the 9th century is not impossible,⁶⁷ but can be confirmed only by a thorough study of Hunneschans ware and of its relationship with Badorf-type and Pingsdorf-type ware.

One of the most intriguing finds has not yet been discussed. In 1949 local workmen discovered an important coin-hoard in the village of Zelzate. The hoard had been hidden in a red-painted costrel (PL. XII, A) of light-coloured fabric, which has ever since been known as the Zelzate pot.⁶⁸ Unfortunately the coins had already been divided among the workmen before Dhondt and Van de Walle were told of the find. From the coins they were able to study they concluded that the hoard and the costrel could be dated c. 840, in which case the costrel might prove that the Pingsdorf kilns existed before the middle of the 9th century.⁶⁹ More recent studies, especially that by P. Naster,⁷⁰ have shown that the hoard

⁶¹ I am grateful to A. L. J. Van de Walle and H. Thoen of the University of Ghent for this information. Some of these finds, and especially those from the count's castle in Ghent, have been studied by S. Peck, *De roodbeschilderde, zgn. Pingsdorferceramiek uit het Gravensteen to Gent, en de verspreiding van deze soort ceramiek over Noordwest Europa* (unpublished thesis, Ghent, 1968).

⁶² S. J. De Laet, A. Van Doorselaer, M. Desittere and H. Thoen, 'Oudheidkundige opgravingen en vondsten in Oostvlaanderen', *Kultureel jaarb. van de provincie Oostvlaanderen*, 4 ser., xix (1965), 168.

⁶³ R. Borremans, 'Middelieuwe ceramiek uit Tongeren en Stokkem', *Het Oude Land van Loon* (1955), pp. 13-17 (= *Archaeologica Belgica*, xxixb (Brussels, 1956), 3-7); *id.*, 'Ceramiek uit de "Borch" te Grimbergen', *Eigen Schoon en de Brabander*, xxxviii (1955), 464-6 (= *Archaeologica Belgica*, xxixd, 2-5).

⁶⁴ A. Claassen, 'Archeologische resten uit het Middelieuwe Limburg', *Limburg*, xl (1961), 327-53.

⁶⁵ O. E. Mayer, 'Raeren: Eisenschlackenhalde des 12. Jahrhunderts', *Archeologie* (1967), pp. 69-70.

⁶⁶ I am grateful to Prof. J. Mertens of the Service Nationale des Fouilles for this information.

⁶⁷ Hübener (1959), p. 121.

⁶⁸ Dhondt and Van De Walle (1949-50); Böhner (1950), pp. 216-17.

⁶⁹ Dhondt and Van De Walle (1949-50), pp. 5-8.

⁷⁰ P. Naster, 'Trouvailles de monnaies carolingiennes à Zelzate', *Rev. belge de numismatique*, cxvii (1950), 208-24.

seems to be later and probably belongs between *c.* 870 and *c.* 880. The hoard (or at least that part of it available for study) is very similar to that found at Muizen, near Malines, in 1906, which could be dated between *c.* 875 and *c.* 884, as it contained an Arab *dirhem* of 866.⁷¹

The main problem is whether the Zelzate costrel is a product of the Pingsdorf kilns. The round costrel with a small cylindrical neck, to which are attached two small strap-handles, is a common form, which occurs from Roman times onwards and cannot be called typical of any one production centre. The buff fabric with rather sandy tempering material is similar to the fabric of Pingsdorf wares. On the other hand, the decoration, which consists of broad, red-painted lines is, completely different from normal early Pingsdorf style of decoration, which is more irregular and consists of rows of comma-like strokes and dribbles. The decoration of the Zelzate pot was made with a ferrous slip, which turned red on firing.⁷² There is therefore no proof that the Zelzate costrel was made in the Pingsdorf area and the general opinion is that the costrel represents a western group of red-painted pottery.⁷³ In this respect the date of 870–880 is very significant, as it seems, from all previous evidence, that Pingsdorf pottery started in the period from *c.* 880 to *c.* 900 and no earlier (see below, p. 122 f.). So the origin of the Zelzate costrel remains uncertain. There are two possibilities: either the costrel was made in a still unknown kiln or pottery centre in W. Belgium or even in NW. France; or it has a Rhenish origin. The first can only be verified by thorough research on red-painted pottery found in these regions, and remains very hypothetical. The second possibility is supported by early medieval red-painted pottery found, for example, at Mayen in Germany.⁷⁴ A thorough analysis of the fabric of the Zelzate pot could be of some help in determining its origin.

ORIGINS OF GLAZE

In post-Roman western Europe glazed pottery does not seem to appear until the end of the 9th or the beginning of the 10th century, when the production of high quality, lead-glazed pottery was started in the Stamford area in East Anglia. During the 11th century other pottery centres started production of partially glazed, fine-quality wares: Andenne in the province of Namur (Belgium), and the kilns of Brunssum and Schinveld in Dutch Limburg. It seems that Andenne was more important than the Brunssum-Schinveld kilns, where glazed pottery was produced only from the end of the 11th century until *c.* 1125, after which knowledge of glazing techniques was lost, or production considered too expensive. It was not until the middle of the 14th century that lead-glazed pottery reappeared among the products of the Brunssum-Schinveld kilns (see below, p. 131 f.). Meanwhile, the Andenne products had rapidly become very well known and by the end of the 12th century were being exported over a wide area.⁷⁵ In this

⁷¹ H. Roosens, 'Trouvaille de monnaies carolingiennes à Muizen-lez-Malines', *ibid.*, pp. 203–8.

⁷² Dhondt and Van De Walle (1949–50), pp. 5–7.

⁷³ Hinz (1965), pp. 273–4.

⁷⁴ Ament (1964).

⁷⁵ Cf. distribution-map and list of sites by Borremans and Warginaire (1966), pp. 80–4.

period the most characteristic form was a large pitcher with a high, collared rim to which are attached one, two or even three little strap-handles, a sagging base, a tubular spout and a typical horizontal band of lead-glazed decoration on the shoulder. Occasionally some pitchers were almost completely glazed. Other decoration, such as rouletting and applied strips of clay (mostly vertical), also occurs. The fabric is whitish or pink and mostly very fine and smooth.

In Belgium products of all these kilns occur in the 11th and 12th centuries, but, as one would suspect, the finds of Andenne products far outnumber the finds of glazed Brunssum-Schinveld wares. Andenne pottery has been found at Antwerp, Eename and Grimbergen amongst other places, and of course also at Andenne, together with the remains of some of the kilns. From the distribution-map published by Borremans it seems that Andenne ware is mainly found in the Belgian provinces of Antwerp, Brabant, Liège, Limburg and Namur, and in particular along the rivers Meuse, Dyle and Ourthe. Less of this pottery has been found in the western part of the country, though this might be due to lack of archaeological investigation. Glazed pottery from the Brunssum-Schinveld kilns probably also occurs mainly in the eastern part of Belgium. Some of the glazed pottery found at Antwerp may have been made in Dutch Limburg.⁷⁶

Some of the lead-glazed pottery from Antwerp cannot be identified as a product either of Andenne or of Brunssum-Schinveld, either from a typological or a technological point of view. The whitish or creamy fabric is somewhat coarser (with a rather pimply surface) than that of Andenne ware, as the sandy tempering material seems to have a coarser granulation. Most of the pottery is almost completely glazed, which is not typical of Andenne ware. From a typological point of view, the many handle-fragments found are of little strap-handles, which are attached to the shoulders of the pots (probably mostly pitchers) and not, as with Andenne and Brunssum-Schinveld wares, to the rims. Some of the pitchers from Antwerp are more ovoid in shape than those from Andenne and Brunssum-Schinveld and more like the pitcher from Lime Street, London.⁷⁷ Finally, Van de Walle has discovered partially glazed sherds with the same characteristics as the Antwerp finds at Eename (E. Flanders) in an archaeological context which he dates before 1063, i.e. some decades earlier than the beginning of production at Andenne and Brunssum-Schinveld.⁷⁸ One conclusion seems certain: during the 11th century a still unknown pottery centre produced fine quality, partially glazed pottery. There is still no proof of its existence, though the idea has several times been suggested,⁷⁹ nor are there any certain indications as to its location, though Borremans has drawn attention to similarities between Andenne ware and the pottery of France.⁸⁰ It is remarkable that this particular type of glazed pottery only occurs so far in the western part of Belgium, along the River Scheldt.

Looking farther afield it seems that the origin of glaze is to be sought in the

⁷⁶ I am grateful to A. L. J. Van De Walle for this information. Some of the rim-fragments from Antwerp have a profile which occurs at Brunssum-Schinveld but not at Andenne.

⁷⁷ Dunning (1959), pp. 61-2, fig. 33.

⁷⁸ I am grateful to Van De Walle for this information. See also Van De Walle (1945).

⁷⁹ Dunning (1959), p. 62; Borremans and Warginaire (1966), p. 88.

⁸⁰ *Ibid.*, pp. 87-8.

Byzantine area, as was originally suggested by Stevenson, who drew the attention of archaeologists to the technical analogies between the Byzantine lead glaze of the 9th century and the Stamford glaze, which was then considered the earliest medieval lead glaze of NW. Europe.⁸¹ Byzantine lead glaze may go back to classical times. In the Roman period lead-glazed pottery was also produced in the Rhineland, France and England, but there is apparently no continuity between this Roman lead-glazed pottery and medieval glazed wares.⁸² From the 4th century until c. 800 no glazed wares occur in NW. Europe, except for two finds on the upper Rhine, at Forstfeld and Singen/Hohentweil (see below, p. 127 f.). These exceptional finds only serve to stress the lack of early medieval glazed pottery, although new finds are always possible. The glazed pottery from Burgh has been ascribed to the later part of the 9th century by Braat, but it seems that this early date can no longer be accepted (see below, p. 130). Consequently, either Andenne ware or some of the Antwerp finds (and, of course, the products of the hypothetical pottery centre discussed above, p. 109) should be considered the earliest glazed pottery from the continent. New finds, especially in France (see below, p. 118 f.), may be expected and may well forge the missing link between Byzantine and Stamford glaze. Stamford glaze and Andenne glaze are so similar in composition that it has been suggested that both developed from a common origin.⁸³ On the other hand it has also been suggested that Andenne ware was made by potters from France⁸⁴ and, as I have said (p. 109), there are indications that some of the glazed pottery from Antwerp was not made at Andenne or Brunssum-Schinveld, but in a pottery centre placed tentatively in France or W. Belgium.

TECHNIQUE OF MANUFACTURE

RED-PAINTED WARE

The very characteristic red or brownish paint of the Pingsdorf-type wares contains a large amount of iron oxide, which accounts for the reddish colour and proves that the wares were fired in an oxidizing atmosphere. When the products were submitted to a higher firing temperature, the plain red of the decoration turned brown or even blackish or purplish brown. Bruijn, who has studied the Brunssum-Schinveld kilns, concludes that higher firing temperatures and the consequent very dark colours of both fabric and paint account for the disappearance of red-painted decoration in the 13th century.⁸⁵

GLAZED WARE

The glaze on Andenne wares and on the pottery found at Antwerp and Eename is a lead glaze, which, though of very high quality, shows defects very typical of glaze, such as crazing and pinholing. The products were fired at a

⁸¹ Stevenson (1954).

⁸² R. J. Charleston, *Roman Pottery* (London, 1955), pp. 24-31.

⁸³ J. W. G. Musty and L. C. Thomas, 'The spectrographical examination of English and continental glazed pottery', *Archaeometry*, v (1962), 49.

⁸⁴ Borremans and Warginaire (1966), pp. 80-4.

⁸⁵ Bruijn (1962-3), pp. 424-39; Bruijn (1965), pp. 16-17 and 21-2.

temperature varying from *c.* 900 °C. to *c.* 1000 °C. The glaze is thick and was probably applied as a liquid solution with a brush. In the 12th century, to judge from the Antwerp finds, another technique also seems to have been used. The pottery was probably dusted with lead or lead oxide filings, which, at a temperature of *c.* 900 °C., combined with the silicates of the clay to form a lead glaze. This technique can very easily be traced, as the surface of the pottery shows very small, rounded pits, around which the glaze has spread. This can happen accidentally, and then only a few drops of glaze, with a tiny pit in the centre of each drop, occur on the surface. However, among the Antwerp finds, there are several partially glazed sherds, which seem to have been deliberately glazed in this way. The fact that this dusting technique seems to have been used in the 12th century is worth mentioning, as it has been suggested that it was first extensively used in the Brunssum-Schinveld kilns about the middle of the 14th century.⁸⁵ The colour of the glaze is mostly yellow, although orange occurs (mostly when the fabric is pinkish), as well as yellowish green which has probably been caused by a partial reduction. The presence of iron impurities accounts for the yellow and orange colours as well as for the greenish tinges.⁸⁶ Furthermore, there seems to be a direct relationship between the darkness of the colours and the thickness of the glaze.

Little can be said about the clay and the tempering material, as no extensive analyses have been carried out. However, it is known that Andenne ware was made with a very fine, plastic clay, *blanche derle*, which occurs in the area. Even in the 17th century this clay was still noted for its very good quality.⁸⁷ The tempering material is probably sand; it is very fine which accounts for the smoothness of the fabric.

CONCLUSIONS

In Roman times the technique of glazing pottery was, if not common, at least known in the NW. empire and certainly well known in the eastern provinces. After the migration period the technique was lost, except in the Byzantine empire, where a long Roman and pre-Roman tradition existed. During the 9th century with the revival of the Byzantine pottery industry, high-quality glazed pottery was produced and lead glaze became well known. In the same period lead-glazed pottery was also produced in Italy, presumably influenced by that from the Byzantine area (see below, p. 142). Knowledge of glazing techniques was brought to England from the Mediterranean, probably by one of the routes suggested by Dunning.⁸⁸ It seems that France may have played an important part in the spread of this knowledge. There may be a relationship between Stamford glaze and later continental glaze, with the latter developing from the former, or both developing from a common source. This, of course, only applies to the knowledge of glazing techniques and not to the typology of the pots. The

⁸⁶ Lead glaze, which contains iron impurities, turns red or yellow in an oxidizing kiln atmosphere, and greenish in a reducing kiln atmosphere. Greenish colours do not necessarily imply the presence of copper. See D. Green, *Understanding Pottery Glazes* (London, 1963), pp. 75–81.

⁸⁷ Borremans and Lassance (1956), pp. 7–8.

⁸⁸ Dunning (1959), p. 42.

typological differences between Stamford pottery and continental glazed ware are obvious, notwithstanding certain similarities, and may indicate that the problem of glaze is purely technological, i.e. it is the problem of the origin of a technique or of the origin of the knowledge of a technique. This leads me to conclude that knowledge of glazing techniques in NW. Europe is not the result of a mass import of Byzantine glazed pottery and of local imitation, but is due probably, as Stevenson suggested, to the migration of skilled craftsmen.⁸⁹

The problem of the origin of red-painted ware seems to be also purely technological. It is probable that this technique goes back to Roman times, and there may have been a certain continuity between Roman pottery traditions and medieval red-painted decoration, especially in the Rhineland where early medieval red-painted pottery occurs (see below, pp. 124 ff.). Further, Tischler has described a Spanish red-painted pottery group, which could be early medieval; it shows remarkable resemblances to Pingsdorf pottery, and may be the result of the influence of a Roman tradition (see above, p. 99 f.). In the other Mediterranean areas the same continuity seems to have existed. I suggest three hypotheses: i, the red-painted decoration of Pingsdorf-type wares came to life in the Rhineland through the influence of local pottery traditions, which go back to Roman times; ii, knowledge of the technique was brought to the Rhineland from the Mediterranean where Roman pottery traditions were probably very strong; iii, revival of Roman pottery traditions in the Rhineland stems directly from imports of Mediterranean red-painted pottery. In any case the technique of red-painted decoration derives from Roman pottery traditions.

To prove these hypotheses or at least to test their value thorough archaeological investigation must be carried out in France and Belgium. Typological study only will probably not be enough. Much research should be concentrated on technological aspects of the pottery, and analyses would certainly prove very helpful. Only by combining typological and technological study will it be possible to elucidate the origins of both glazed and red-painted pottery.

As the red-painted pottery from Belgium has not yet been thoroughly studied, it would be rather incautious to jump to conclusions concerning the value of it for solving the general problem of the origin of red-painted Pingsdorf style decoration. However, it should be noted that, if the general opinion that the Zelzate costrel belongs to a western group of red-painted pottery and was not made in the Pingsdorf area is correct, it proves that during the 9th century and perhaps at a date earlier than the oldest Pingsdorf kilns red-painted pottery was produced in regions west of the Rhineland. (Later red-painted pottery made in Dutch Limburg is probably an imitation of Pingsdorf wares.) Did Pingsdorf pottery originate from this hypothetical western group? Did the latter in turn originate from Mediterranean influences? Only thorough study of red-painted wares can answer these questions. The analogy with the problem of the origin of glaze is striking. If the origins of red-painted decoration are to be sought in the Mediterranean area, it may be that knowledge of this painting technique and of the glazing technique travelled by the same or a similar route.

⁸⁹ Stevenson (1954), p. 93.

IV. FRANCE

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In his survey of Carolingian pottery in central Europe, H. Hinz wrote in 1965: 'It is not possible to discuss Carolingian pottery from the area of present day France. The available space and time made it impossible to start the difficult work of collecting the material which seems to be rare in the museums and has so far never been made the subject of a general survey. Nevertheless, the key to many problems concerning this pottery may be found in this area. It has already been pointed out that medieval glazes, and the more doubtful ones of the 9th century, may have started in France. It is also possible to look there for a common centre for the red-painted pottery of the upper Rhine, Trier, Cologne, Belgium and the Netherlands.'⁹¹ This theory is now largely vindicated, but not by listing the Carolingian pottery in French museums, since many of them have no definite evidence for the provenience of this pottery. Careful excavations have, however, now been carried out for several years on Carolingian sites which have produced new evidence for our understanding of medieval pottery. We propose to describe briefly, in the light of these recent discoveries, the present state of the problem of the origins of red-painted and glazed pottery in medieval France.

RED-PAINTED POTTERY

It is necessary to divide the development of red-painted pottery in France into two periods.

1. Before the 11th century red-painted pottery is found only in NE. France in the area east and north of the upper Seine. This pottery is related to Pingsdorf ware, especially in its decoration which is painted with a thick slip rich in iron oxide, in the form of commas or a trellis. During excavations on the site of the Basse-Oeuvre at Beauvais E. Chami found many sherds of this pottery, some of them clearly stratified in levels earlier than the end of the 10th century. More recently P. Leman has found a number of important painted vessels with a quite new type of decoration near Beauvais Cathedral. It is certain that these are the oldest examples of painted pottery so far known from France. In 1966 M. Fleury excavated an unusual and complete pitcher in Notre-Dame, Paris.⁹² Its painted decoration in the form of commas is clearly similar to 10th-century Pingsdorf ware, but its shape, without handles or tubular spout, is different from the commonest type of Pingsdorf pitchers. On present evidence it is not possible to say whether it was made in the Paris area, but local museums, and especially the Carnavelet Museum in Paris which is so rich in finds from the city, do not possess any examples of red-painted pottery of the Carolingian period. The same is true

⁹⁰ French text translated and edited by J. G. Hurst.

⁹¹ Hinz (1968), p. 286.

⁹² In the Notre-Dame Museum (accession no. 320) and to be published by Mr. Fleury.

of the Departmental Museum of Antiquities at Rouen which contains most of the discoveries made by the abbé Cochet in the 19th century in and near the town.

The technique of red painting, therefore, which had a remarkable development in the 10th century in the Vorgebirge area near Cologne was also known in that part of NE. France between Strasbourg (see below, p. 125) and Beauvais. There is little doubt that in this area the manufacture of painted pottery continued without interruption from perhaps a very early date until the 13th century. The discoveries made in 1968 by Leman east of Beauvais Cathedral confirm this.

2. At the end of the 12th century red-painted pottery appeared in many areas of France where it was previously unknown. In Normandy, where many excavations have been carried out, red-painted pottery has never been found in levels certainly earlier than the 13th century. A kiln found in 1966 at Argentan (Orne) contained large quantities of painted pottery which it is possible to date by thermo-remnant magnetism to c. 1230.⁹³ At Doué la Fontaine (Maine et Loire), where more than 20,000 sherds of the 10th and 11th centuries have been excavated, there is not a single painted sherd. But the Saint-Jean Museum in Angers contains several pots with orange-red painting which belong to the 13th century. A well-stratified trench dug in 1967 in the old part of the town of Angers demonstrated that red-painted pottery does not appear until the 13th century. The museum in Guéret (Creuse) contains some small funerary pots of which a few are decorated with red-painted chevrons. G. Janicaud, who has carefully excavated many ancient cemeteries in Creuse, noted that these small pots are found in Merovingian tombs, but that only in the 1st quarter of the 13th century do they begin to have red-painted decoration.⁹⁴ The red-painted pottery of Paris, which is well represented in the museums of Carnavalet, Cluny, Sèvres and Saint-Denis, cannot be dated by stratigraphical evidence, but its shapes show that it is not earlier than the 13th century and where it has been found in an archaeological context this dating is confirmed.⁹⁵ It should also be remembered that at Andenne in Belgium red-painted decoration associated with glaze does not appear until period IIb, that is in the 1st quarter of the 13th century.⁹⁶

French red-painted pottery of the 12th and 13th centuries is very different from that found in the Carolingian period, especially that from Beauvais. The slip used by the Beauvais potters in the 10th century seems to have been a mixture of fine clay and iron oxide while that from Pingsdorf at the same period has a pimply and bloated appearance and contains no clay but is made of grains so rich in iron

⁹³ *Annales de Normandie*, xvii (1967), 365-433.

⁹⁴ G. Janicaud, 'Les Sépultures des époques barbare et féodale dans la Creuse', *Mémoires de la soc. des sciences naturelles et archéol. de la Creuse*, xxvii (1939), 257-71.

⁹⁵ This was the opinion of Magne in the 19th century who found some of these vessels: Ch. Magne, 'La Céramique parisienne du XIII^e siècle: les poteries funéraires et les poteries à usage domestique', *Bull. de la Montagne Ste. Geneviève et ses abords*, 1 (1895-6), 106. Mme. Durand-Lefebvre, 'Les Vases parisiens dits flammulés du Musée Carnavalet', *Bull. de la soc. nat. des antiq. de France* (1942), pp. 259-66, states that the painted pottery in the Carnavalet Museum belongs to the 13th and 14th centuries to judge from its proveniences and associated objects. The 11th- and 12th-century dating proposed by Dunning ((1959), pp. 62-71) for these pots and recently repeated by K. J. Barton ('The medieval pottery of Paris', *Med. Archaeol.*, x (1966), 73) seems to us to be much too early.

⁹⁶ Borremans and Warginaire (1966), p. 86.

that they are attracted by a magnet.⁹⁷ On the other hand the 12th- and 13th-century red-painted pottery from Paris, Rouen, Caen and Argentan was decorated with a simple slip of natural ochre or red clay. This later group is decorated in patterns characteristic of the centres of manufacture, so that it is easy to recognize the provenience of a pot simply by examining its decoration. The listing of vessels in museums makes it possible to map the exact geographical areas in which the potters sold their wares.

GLAZED POTTERY

There has been until now no publication in France of early glazed pottery coming from an excavation and dated by stratigraphical criteria. During excavations between 1922 and 1925 at Canet (Dordogne) there were found, in the medieval levels over the foundations of a Gallo-Roman villa, 'pitchers with bridge spouts of the 5th and 6th centuries' of which 'the most recent were covered outside with a rough lead-glaze'.⁹⁸ In fact, these pitchers, which belong to the *pégau* type, are much later. Dunning has also drawn attention to a jug with a small spot of green glaze from St. Genis-Hiersac (Charente), in the Archaeological Museum at Angoulême, which is considered to be Merovingian in date.⁹⁹ This jug seems to have been lost since Dunning saw it in the 1930s.

At the abbey of Ligugé (Vienne) Dom J. Coquet has found a glazed tile-pavement which he ascribes to the end of the 7th century (see below, p. 120).¹⁰⁰ This date is contested by eminent art historians¹⁰¹ who are certain that such pavements did not exist before the beginning of the 12th century. But at Winchester M. Biddle has recently found glazed floor-tiles (though of a different type) earlier than the 12th century.

GLAZED POTTERY FROM DOUÉ LA FONTAINE (MAINE ET LOIRE)

The excavations in progress at Doué la Fontaine have produced well-stratified glazed sherds, the lowest level belonging before 900. (A denier of King Eude (887-98) lay on the top of it.) The trench (FIG. 39) was cut at right angles to the wall of a large rectangular building which was buried in a motte about the middle of the 11th century. The architectural features of the building suggest a 10th-century date, but the stratigraphy provides more certain evidence. The occupation-layer (level 2) which lies above the natural soil (level 1) is earlier than the building, for it is cut by its foundation-trench (level 3). When the foundations were completed a layer of clay was spread (level 3), and over this was a workers' level containing waste sand and lime used in the preparation of mortar (level 4). A black layer (level 5) full of charcoal, animal bones and sherds corresponded with the first

⁹⁷ Christiane Guibert, 'La Céramique d'Argentan. Étude chimique et dilatométrique', *Annales de Normandie*, xvii (1967), 421-32.

⁹⁸ A. Conil, 'Villa romaine du Canet', *Rév. des musées et collections archéol.*, vi (1926), 209.

⁹⁹ *Catalogue du musée de la soc. archéol. et hist. de la Charente* (Angoulême, 1915), p. 106, no. 9.

¹⁰⁰ J. Coquet (1963), pp. 80-90.

¹⁰¹ Cf. H. Stern, 'Mosaïques de pavement préromanes et romanes en France', *Cahiers de civilisation médiévale*, v (1962), 13-33.

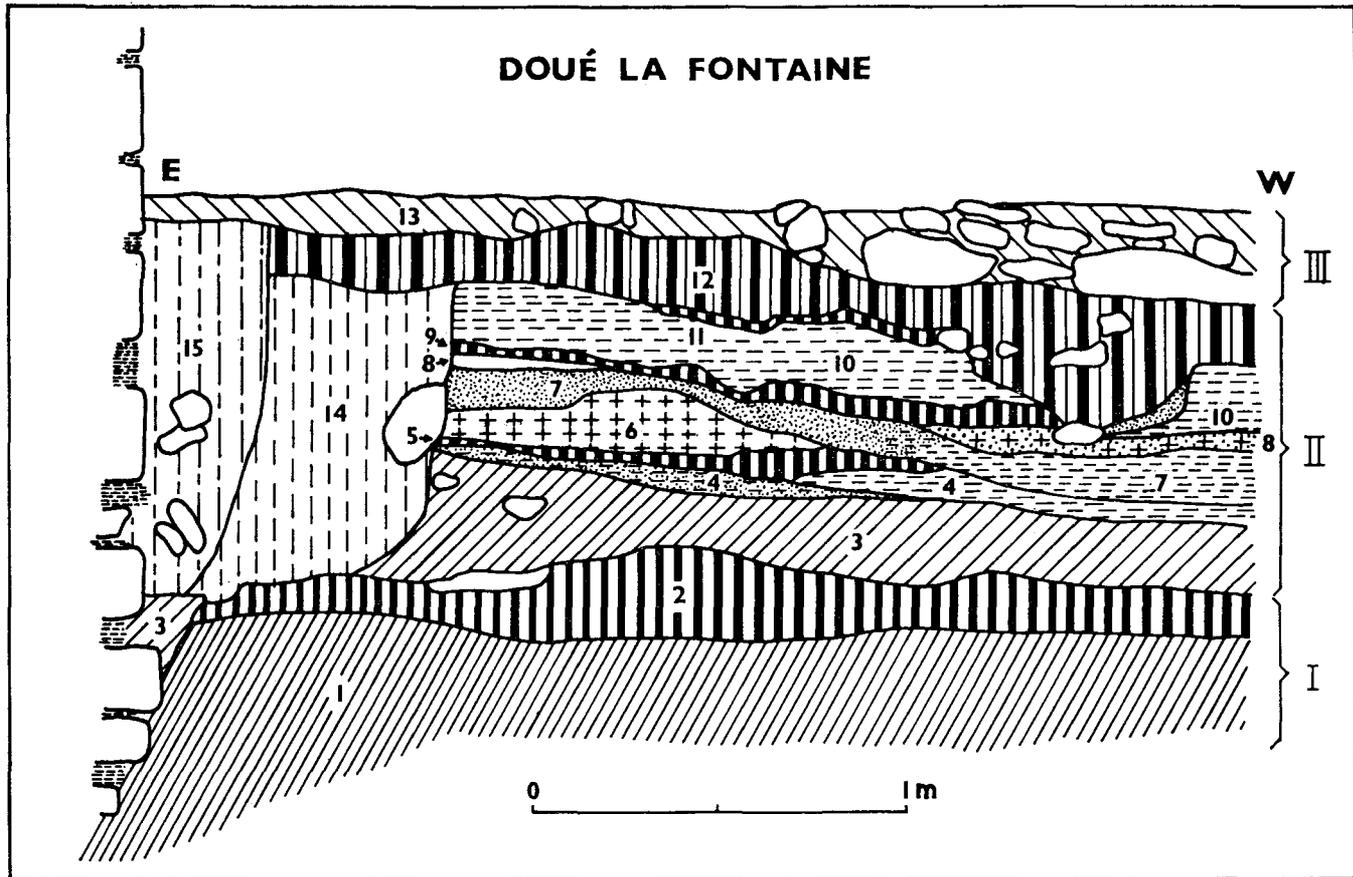


FIG. 39

DOUÉ LA FONTAINE (MAINE ET LOIRE)

Section showing sequence of layers dating from 800 to 1050. For description and key to layers see pp. 115, 117 f.

period of occupation of the building. After an intense fire which totally reddened the inside of the wall and calcined it above level 4, the walls were redressed and the building raised by another story (levels 6-10). This fire is dated 850-950 by carbon-14 and thermo-remnant magnetism. Level 9, which contains finds similar to those from level 4, shows that there was a period of interruption in this work. Level 12, containing kitchen waste with many sherds, represents a second phase in the occupation of the building, and yielded a coin struck at Melle between 970 and 990. Near by and in the same level an *obole* struck at Chinon between 950 and 980 was found. Level 13 forms part of the motte which was raised about 1050.

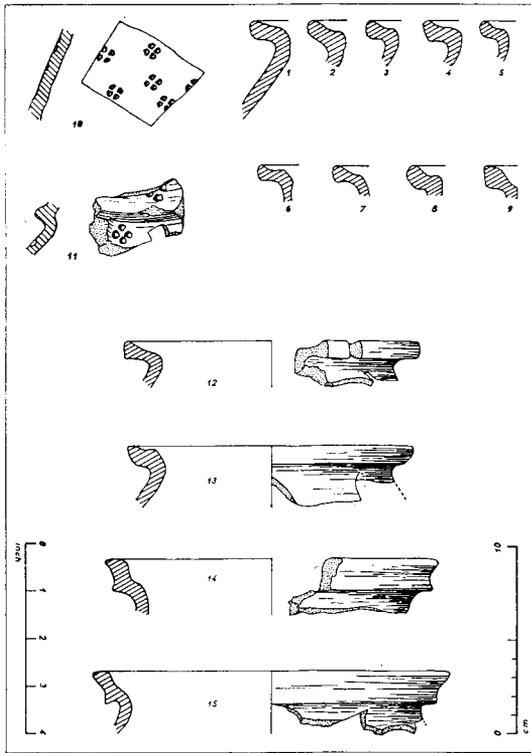


FIG. 40

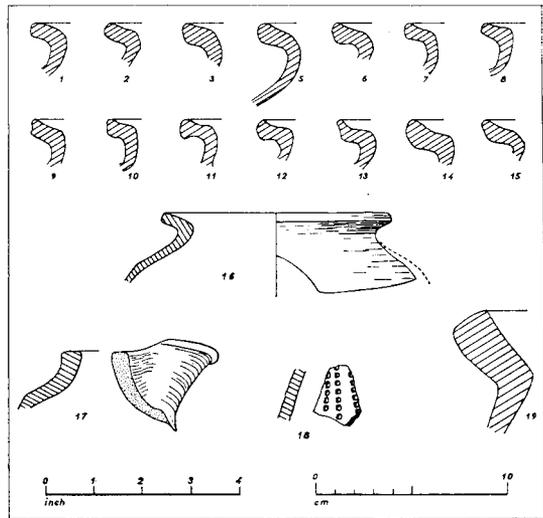


FIG. 41

FIGS. 40 and 41
DOUÉ LA FONTAINE (MAINE ET LOIRE)
9th- and 10th-century coarse pottery (p. 117 f.). Sc. $\frac{1}{4}$

It is, therefore, reasonable to ascribe to just before 900, the contents of level 2, and the finds from levels 4 to 12 may perhaps belong to the 10th century. The thousands of unglazed sherds found between levels 2 and 12 form a very homogeneous group in regard to fabric, thickness (3 to 5 mm. in the central part of the side) and rim profiles (FIGS. 40-1). In the same levels glazed sherds with a general appearance very similar to Stamford ware were also found. These have

been examined chemically and dilatometrically in the laboratory of the Centre de Recherches Archéologiques Médiévales and compared with sherds from Stamford.¹⁰² The 10th-century glaze found at Doué ranges in colour from orange to green-yellow.¹⁰³ It has not been possible yet to reconstruct a complete pot but it looks as though the outside was completely, or almost completely, covered in glaze.

With regard to the chemical composition of the fabric there is a clear difference between the glazed and the unglazed wares, in that the former contain very little sodium or potassium. This does not necessarily mean that the glazed wares were imported and the coarse wares made on the spot. The lack of sodium and potassium may solely be the result of careful preparation (for example, by levigation) of the clay.¹⁰⁴ The same characteristics were noted in the Stamford sherds. The firing temperature of the 10th-century glazed pottery from Doué was *c.* 1000 °C., while the sherds from Stamford were only fired to *c.* 950 °C.

The colour variations observed in the Doué glaze are related to the oxidization or reduction in firing. When the sherds were placed in an oxidizing atmosphere in an electric kiln they all became orange. The greenish colours of several sherds were due to the presence of iron, and not to copper, since the traces of it were too small to cause any change in colour.¹⁰⁵ The Doué glaze was completely soluble in a 10 per cent. solution of nitric acid but the Stamford glaze only partially dissolved (from 6 per cent. to 13 per cent.) in the same concentration; complete dissolution was only obtained in hydrofluoric acid.¹⁰⁶ It appears, therefore, that the Doué glaze contains about twice as much iron oxide and ten times as much lead oxide as the Stamford glaze. The Stamford glaze contains many impurities.¹⁰⁷

CONCLUSION

The study of the Doué pottery is not finished, but for the first time it is possible to confirm that glazed pottery was used, and probably made, in western France in the 9th century. Was this a new technique recently imported from the Mediterranean world? Or is it possible that the manufacture of glazed pottery had survived from Roman times? The origin of Stamford ware poses the same problem. It has been suggested that the technique of lead glaze was carried by sea from Byzantium to East Anglia.¹⁰⁸ The recent discoveries at Doué la Fontaine are not of a kind to confirm this hypothesis.

Considering the rarity and sporadic character of the information that we

¹⁰² We are very grateful to Christine Mahany for providing the Stamford sherds for examination.

¹⁰³ Orange (E. Séguy, *Code universel des couleurs*, Paris, 1936), no. 196; yellow-brown, no. 213; yellow-green, nos. 224-5; orange-brown, no. 246; lemon-yellow, nos. 317-18; green-yellow, nos. 323-5.

¹⁰⁴ The chemical composition of the fabric is the same for glazed and unglazed ware in the latest levels of the 11th century.

¹⁰⁵ 0.2 gram of copper to 100 grams of lead oxide.

¹⁰⁶ The reason for this difference was shown by an analysis of the glaze proportions:

	Fe ₂ O ₃	TiO ₂	K ₂ O	Na ₂ O	PbO
Doué	6	3	4	1	200 to 400
Stamford	3	3	3	1	10 to 50

¹⁰⁷ It is probably the presence of silica combined with lead which makes the glaze insoluble in nitric acid. The same insolubility has been obtained experimentally by mixing sodium silicate with ground lead.

¹⁰⁸ Stevenson (1954), pp. 91-3.

possess about red painting and glaze in medieval France it would be adventurous to formulate a general conclusion. However, the work recently carried out in Beauvais and in Anjou leads one to think that, at the end of the Carolingian period, northern France was divided into two zones: the east where red-painted pottery was made, and the west where lead-glazed pottery was made.

EIGHTH-CENTURY GLAZED POTTERY FROM NARBONNE, AUDE

by Jean Lacam,¹⁰⁹ *Conservateur des Musées de Toulon*

Excavations in the courtyard of La Madeleine Church, Narbonne, in September 1952¹¹⁰ produced a sequence running from the 3rd to the 19th century. In the 3rd-century Roman levels when the first church was built lead-glazed sherds were found. These wares continued in use until the 5th century after which there was an interruption in the use of glaze during the Visigothic period until the Arabo-Visigothic levels of the 8th century.

This 8th-century level contained: i, (FIG. 42), a jug, grey fabric with quartz grits, decorated with two horizontal incised lines, brown-black lead glaze inside, dribbling a little over the outside. The colouring is caused by the addition of iron and manganese oxides to the lead glaze.¹¹¹ Similar sherds in a grey fabric and with the same glaze have been found in a 9th-century context at Garde-Freinet (Var.); ii, part of the shoulder of a pot in a hard fine pink fabric, on the exterior a yellow slip with incised decoration of a wavy line between two parallel lines, and on the inside yellow lead glaze over a white slip; iii, part of the neck of a pot in a soft fine pink fabric, on the exterior a yellow slip with incised decoration of two parallel lines, and on the inside olive-green lead glaze (oxide of copper and lead); iv, part of the neck of a large cooking-pot in a coarse grey fabric, the exterior blackened by use over the fire, and on the inside brown lead glaze (oxide of manganese and lead); v, part of the body of a large jar in a hard fine red fabric, on the exterior a very thick yellow slip, and on the inside blue alkaline glaze with oxide of copper; vi, a jug in a red fabric with traces of overfiring or grey fuming of the rim, the exterior grey and decorated with a horizontal line round the shoulder and with a rod handle attached under the neck and to the shoulder, and on the inside brown manganese lead glaze discoloured black.

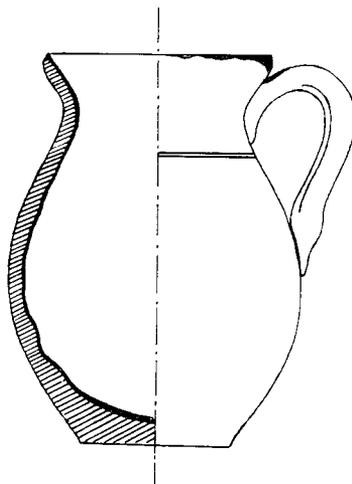


FIG. 42

NARBONNE (AUDE)

8th-century glazed jug from courtyard of La Madeleine Church (p. 119). Sc. $\frac{1}{4}$

¹⁰⁹ French text translated and edited by J. G. Hurst.

¹¹⁰ J. Lacam, 'Mission archéologique à Narbonne', *Bull. comm. archéol. Narbonne*, xxiii (1951-2), 86-93; *id.*, 'Vestiges de l'occupation arabe en Narbonnaise', *Cahiers archéol.*, viii (1956), 93-115.

¹¹¹ Analysed by the laboratory of the National Porcelain Factory at Sèvres.

After examining and comparing Roman and Islamic methods it became clear that the technique of glazing found at Narbonne was imported but that the manufacture was local. The clay from which these wares was made comes from Corbières, near Narbonne.¹¹¹

GLAZED FLOOR-TILES FROM LIGUGÉ ABBEY, VIENNE

by Dom Jean Coquet,¹¹² *Abbaye Saint-Martin, Ligugé*

The glazed floor-tiles discovered at Ligugé between 1950 and 1960¹¹³ were originally part of a pavement covering an area of nearly 400 sq. metres. Part still survives in the N. apse of the Merovingian church (PL. XII, B). It formerly covered the central nave, the crossing, the transepts and the sanctuary over the crypt. The building of the E. end belongs to c. 690. This date is determined by a series of historical and architectural factors and supported by a carbon-14 date of 575 ± 120 (by the laboratory of the Centre d'Études Nucléaires at Saclay) for the charcoal mixed with the mortar of the apse. Stratigraphy and examination of later architectural alterations demonstrate that the tiles must be contemporary with the charcoal.

The tiles form a very homogeneous group despite their variety. There are twelve different shapes made up of parts determined by a module of 13 cm. square. The shapes are those used in Byzantine marble floors using the *opus sectile* technique, in two different colours: rosettes with six petals, chequer patterns in squares or lozenges, chevrons, quatrefoils, scales, peltas, etc. The fabric used was a white-firing clay, tempered with chalk; it was moulded into flat squares, and then cut with a knife. Lead glaze coloured by manganese, copper, or antimony, firing purple, green or yellow, covered the tiles, which were fired at c. 1000 °C.¹¹⁴

The glaze was of very good quality, and comparable with 2nd- and 3rd-century Roman, Byzantine and medieval glazes. The tiles from Ligugé provide a 7th-century link in a period when it had been thought that the technique of glazing had disappeared. On the contrary in Aquitaine, independent at the end of the 7th century, a high technical ability had been attained, or reacquired. The technique of these tiles surpasses those made in France in the 12th century which were of a much rougher fabric with a poorer quality glaze, and fired only to a temperature of 900 °C. The high quality of the Ligugé tiles presupposes the existence of a long technical tradition of making good quality fabrics, of firing in developed kilns and of a knowledge of glazes. It is not possible to argue that they are the earliest examples of the later medieval series of glazed floor-tiles and ascribe them to the beginning of the 12th century; the tradition of glazing tiles disappeared over large areas of W. Europe between the 8th and the 12th centuries.

¹¹² French text translated and edited by J. G. Hurst.

¹¹³ Coquet (1960 and 1963).

¹¹⁴ The director of the National Porcelain Factory at Sèvres kindly analysed the glaze.

V. GERMANY

by UWE LOBBEDEY¹¹⁵*Wissenschaftlicher Referent, Landesamt für Denkmalpflege von Westfalen-Lippe*

RED-PAINTED WARES

DEFINITION OF TERMS

In an attempt to define terms exactly Pingsdorf ware will be compared with other painted wares, especially those from the upper Rhine.

Pingsdorf ware is normally defined as of yellow fabric decorated either with shapeless undulating strokes of paint or with lines forming a lattice pattern in red or brown.¹¹⁶ K. Böhner¹¹⁷ omitted the painted decoration as the main characteristic and considered most important the special fabric—hard-fired ware with an admixture of fine quartz causing a grained surface. This latter definition makes it possible to distinguish between Pingsdorf ware and other painted groups, but there are other difficulties. The many variations in the fabric of Pingsdorf ware proper, found at the potters' village itself, makes the distinction awkward. Although typical Badorf and Pingsdorf fabrics can be defined clearly, certain sherds must be considered transitional. Further, Badorf and Pingsdorf wares were imitated in good quality fabrics by, for example, lower Rhenish potters, and the difference can only be determined by mineralogical analysis.¹¹⁸ Which pottery should be called Pingsdorf ware and which not¹¹⁹ will depend not least on an extensive publication of the finds from Pingsdorf, Walberberg and Badorf, which has not yet been done.¹²⁰ I propose therefore the following provisional categories,¹²¹ which may be useful, especially for western and southern Germany.

1. *Red-painted wares, independent of Pingsdorf ware*

This category includes all red-painted medieval pottery except Pingsdorf and its derivatives. Examples include Carolingian Alsatian ware and Swabian fine ware of the 12th to 15th centuries (see below, p. 124ff.), red-painted Badorf ware (9th-century) which is known also as the Hunneschans group or Badorf-Pingsdorf ware,¹²² and painted Hospital ware from Trier of late Carolingian date.¹²³ Red-painted decoration occurs on a few vessels from Frankish tombs not

¹¹⁵ German text translated by U. Lobbedey and edited by J. G. Hurst.

¹¹⁶ Hübener (1959), pp. 36, 122.

¹¹⁷ Böhner (1950), pp. 208, 216.

¹¹⁸ Böhner (1950), p. 211.

¹¹⁹ Cf. the discussion about the Zelzate costrel: Böhner (1955-6), p. 373, n. 6; Hinz (1965), p. 274 (see also above, p. 107 f.).

¹²⁰ Cf. Lung (1955); Böhner (1955-6), p. 372.

¹²¹ F. Tischler demonstrated the importance of a distinction in 'Zum Aussagewert der bemalten Pingsdorfer Keramik', *Niederrheinisches Jahrb. des Vereins Linker Niederrhein*, III (1951), 52 f. Cf. also U. Lobbedey (1968), pp. 24 f., 75 f.

¹²² Hübener (1959), p. 121; Braat (1960), p. 97.

¹²³ Hussong (1936), p. 87; Hussong (1944), p. 185, fig. 7; L. Hussong, 'Jahresbericht des Rheinischen Landesmuseums Trier für 1938, Kr. Trier-Land, Oberbillig', *Trierer Zeitschrift*, XIV (1939), p. 277 (finds from Oberbillig).

far from Mayen (Eifel)¹²⁴ and on a sherd from a Merovingian settlement-site at Düllstadt (Franconia).¹²⁵ Hand-made pottery decorated with brown strokes and of uncertain date has been found at Strasbourg.¹²⁶

II. *Pingsdorf ware*

This comes from Pingsdorf itself and from other potters' villages near by, in the district between Cologne and Bonn.

III. *Wares derived from Pingsdorf*

The influence of Pingsdorf ware can be seen in three different groups:¹²⁷

a. *Ware of Pingsdorf type (Ware Pingsdorfer Art)* has the same form and fabric as Pingsdorf ware, but was made elsewhere, for instance, on the lower Rhine and in the Eifel region. The separation of this group from Pingsdorf ware proper (no. II) is of more theoretical than practical value because it is difficult to identify without mineralogical analysis.

b. *Imitations of Pingsdorf ware (Nachgeahmte Pingsdorfer Ware)* can often be very clearly distinguished from Pingsdorf ware by the poor fabric, which is often not even wheel-thrown. It was made, for instance, at Seligenstadt-on-Main, Duingen (lower Saxony), Langerwehe (Rhineland) and Brunssum (Dutch Limburg), mainly during the 12th century.

c. *Painted ware in the manner of Pingsdorf ware (Pingsdorfähnlich bemalte Ware)* follows native traditions in type and shape, but is painted like Pingsdorf ware. The museums of Speyer and Worms contain good examples (FIG. 43, no. 1).

DATING OF PINGSDORF WARE (GROUP II)

Earlier controversies about dating Pingsdorf ware were clearly summarized by W. Hübener.¹²⁸ While it is certain that no Pingsdorf ware was made after the beginning of the 13th century¹²⁹ the date of the start of its manufacture is still in doubt. Recent discussion has concentrated on three points: i, the costrel containing a coin-hoard from Zelzate (Belgium); ii, stratified finds from the excavations of Cologne Cathedral; iii, stratified finds from the river-bed levels of Haithabu.

The coins from Zelzate which were first dated *c.* 840, but now *c.* 870–80,¹³⁰ are claimed as dating evidence for early Pingsdorf ware. But there are some scholars who doubt that the Zelzate costrel is Pingsdorf ware. Hinz supposes a

¹²⁴ Ament (1964).

¹²⁵ R. Koch, 'Die ersten frühmittelalterlichen Siedlungsfunde aus Unterfranken', *Mainfränkisches Jahrb. für Geschichte und Kunst*, XIX (1967), 10.

¹²⁶ Strasbourg, Musée archéologique, no. 51.271.

¹²⁷ For references see Lobbedey (1968), pp. 24, 75–6. For group *c* see also R. Haarberg, 'Über Pingsdorfer Keramik im ehemaligen Kurhessen', *Zeitschrift des Vereins für Hessische Geschichte und Landeskunde*, LXXV-LXXVI (1964–5), 71–81.

¹²⁸ Hübener (1959), pp. 122–7.

¹²⁹ U. Lobbedey, 'Zur Kunstgeschichte der rheinischen Keramik vom 12 bis 14 Jahrhundert', *Keramos*, XXVII (1965), 3–37; L. Hussong, 'Die Keramik des Münzschatzfundes von St. Irminen, Trier, 1928', *Trierer Zeitschrift*, XXIX (1966), 236–61.

¹³⁰ Böhner (1950), p. 216–17; Böhner (1955–6), p. 373, n. 6.

Belgian or northern French origin.¹³¹ At present, therefore, the coin-hoard can be claimed as proof only for the existence of painted ware in the last third of the 9th century, and not of Pingsdorf ware (see above, p. 108). Some sherds from the foundation-trench of period VII of the excavations at Cologne Cathedral seem to be typical Pingsdorf ware.¹³² But the building date of c. 820, which O. Doppelfeld and W. Weyres consider as certain,¹³³ has been questioned by I. Achter and A. Verbeek and others who think a date c. 960 much more likely.¹³⁴

At Haithabu there is an excellent opportunity for dating pottery which was found in the layers of sediment above the river-bed and was associated with coins and metal objects—provided that sedimentation took place without disturbance. Hübener's conclusion that Pingsdorf superseded Badorf ware between 880 and 920, or perhaps more probably in the 1st half of the 10th century¹³⁵ is based on six Badorf sherds in 9th-century levels, and on three Pingsdorf sherds in the layers above.¹³⁶ Critics could object to this conclusion on the grounds that statistical methods require more material. A greater number of sherds does not occur before layer 3, which cannot be dated before the middle of the 10th century. This date is confirmed by a pot from Wermelskirchen (Rhineland) (FIG. 43, no. 2) containing 167 coins dated c. 960.¹³⁷ It is of typical Pingsdorf fabric and decoration with waves made either by the fingers or by a brush shaped like a fork with teeth. It is wholly wheel-thrown and the outside of its lower part is cut into a globular shape with a knife.¹³⁸

There is now no doubt that fully developed Pingsdorf ware existed in the middle of the 10th century, and probably considerably earlier. But at present it is as well to bear in mind that although the 2nd half of the 9th century is the commonly accepted date for the beginning of Pingsdorf ware¹³⁹ it is not yet supported by sufficient published and reliable finds. The pot from Wermelskirchen is probably the earliest safely dated example.

¹³¹ Hinz (1965), p. 273 f. Cf. Hübener (1953), p. 179, n. 16; J. G. N. Renaud, 'De Karolingische Muntvonst van Zelsate', *Ber. R.O.B.*, vi (1955), 86 f.

¹³² O. Doppelfeld, 'Die Domgrabung, v. Die Einzelfunde aus der Dreikönigenkapelle', *Kölner Domblatt*, iv-v (1950), 123.

¹³³ O. Doppelfeld, 'Zur Datierung des Alten Domes: Entgegnung', *ibid.*, xiv-xv (1958), 191-5; *id.*, 'Stand der Grabungen und Forschungen am Alten Dom von Köln', *Neue Beiträge zur Kunstgeschichte des 1. Jahrtausends, Frühmittelalterliche Kunst* (Forschungen zur Kunstgeschichte und christlichen Archäologie, vol. 1, no. 2, Baden-Baden, 1954), pp. 69-100; *id.*, 'Die Ausgrabung unter dem Kölner Dom', *Neue Ausgrabungen in Deutschland* (Berlin, 1958), pp. 322-8; W. Weyres, 'Der karolingische Dom zu Köln' in *Karl der Grosse, op. cit.* in note 27, iii, 384-423; *id.*, 'Zur Baugeschichte der vorgotischen Kölner Kathedralen', *Kölner Domblatt*, xxvi-xxvii (1967), 7-56.

¹³⁴ I. Achter, 'Zur Datierung der Periode VII', *ibid.*, xiv-xv (1958), 185-8; A. Verbeek, 'Zum äusseren Mauersockel am Alten Dom', *ibid.*, 188-91; I. Achter, 'Die Kölner Petrusreliquien und die Bautätigkeit Erzbischof Brunos (953-65) am Kölner Dom', in *Das Erste Jahrtausend, V. Elbern* (ed.) text vol. II (Düsseldorf, 1964), 948-91; F. Oswald, L. Schaefer and H. R. Sennhauser, *Vorromanische Kirchenbauten. Katalog der Denkmäler bis zum Ausgang der Ottonen* (Munich, 1966-70) p. 139.

¹³⁵ Hübener (1959), pp. 131-2.

¹³⁶ Hübener (1959), schedule 13. The dating of the metal objects and the stratigraphical problems have been recently discussed by T. Capelle, *Der Metallschmuck von Haithabu* (Neumünster, 1968), pp. 25-9. Dr. K. Schietzel tells me that his recent excavations have not yet produced any major new evidence for dating Badorf or Pingsdorf ware.

¹³⁷ P. Berghaus, 'Beiträge zur deutschen Münzkunde des 10 und 11. Jahrhunderts. 6. Fund Kölner Pfennige von Wermelskirchen (Rhein-Wupper-Kreis) vergraben um 960', *Hamburger Beiträge zur Numismatik*, ix-x (1955-6), 23-9.

¹³⁸ It is possible that this pot belongs to group III, a (ware of Pingsdorf type).

¹³⁹ Cf. Böhner (1950); Stamm (1962), p. 157; Hinz (1965), p. 268 f.

DATING OF RED-PAINTED WARES, INDEPENDENT OF PINGSDORF WARE

Application of red-painted strokes on yellow pottery begins earlier than Pingsdorf ware. It is found on rouletted Badorf ware. Painted Badorf ware, also called the Hunneschans group or Badorf-Pingsdorf ware, apparently accompanies normal Badorf ware as a variant. In contrast to Pingsdorf ware decoration consists of groups of plain stripes; wavy lines do not generally appear.¹⁴⁰ The earliest dated example is a sherd from Vreden (Westphalia), which was found under the clay pavement of the first abbey church. This building probably existed in 839 when some important relics were transferred there.¹⁴¹ This pre-Pingsdorf painted ware may be conveniently compared with the red-painted Hospital ware from Trier.¹⁴² If the date given by L. Hussong (9th century and probably before 881) is right, it is possibly earlier than Pingsdorf ware. Some single finds, among them one pot from Morken mentioned by Hinz¹⁴³ and a few sherds from Dorestad¹⁴⁴ (see below, p. 130), belong to this early group of painted wares, as does possibly a rouletted and painted vessel of unknown date in the museum at Worms (FIG. 43, no. 1).¹⁴⁵ Ament attempts to establish a continuity between this Carolingian painted ware and some red-painted vessels from Frankish tombs of the 7th century from the middle Rhine.¹⁴⁶ But the 8th-century gap cannot be convincingly bridged. A red-painted 4th-century jug from Krefeld-Gellep (Rhineland),¹⁴⁷ decorated with irregular finger-made strokes similar to painted Badorf ware, is in a provincial Roman tradition, but it should not be assumed that this tradition was always carried on in workshops in the same localities. The stream of tradition could have receded and returned with other cultural movements during the dark ages.

Two other groups of red-painted ware of different date and different provenience on the upper Rhine and in Swabia demonstrate this. Some important finds of red-painted Alsatian ware (FIG. 43, nos. 3-8) from Strasbourg have been published by R. Henning, from Ettlingen (near Karlsruhe) by F. Garscha, and recently, from Bouxwiller (Bas Rhin) by F. Rexer.¹⁴⁸ The number of finds is very small, especially compared with Pingsdorf ware and its derivatives. Two types can be distinguished:

- i. Very fine fabric with smoothed surface, light yellow. Only very few finds

¹⁴⁰ Lung (1955), pp. 67-70; Braat (1960); Hübener (1959).

¹⁴¹ H. Claussen and W. Winkelmann, 'Archäologische Untersuchungen unter der Pfarrkirche zu Vreden', *Westfalen*, xxxi (1953), 304 ff., especially p. 313 and fig. 140. Winkelmann compares a painted Badorf pitcher from the cemetery at Lankern (Westphalia). The dating of this pitcher is not clear from the literature.

¹⁴² Hussong, *op. cit.*, in note 123; Hussong (1936); Hussong (1944).

¹⁴³ Hinz (1965), p. 274.

¹⁴⁴ Hübener (1953), p. 179.

¹⁴⁵ Worms, Städt. Kulturinstitut, no. F3139.

¹⁴⁶ Ament (1964), especially p. 324.

¹⁴⁷ R. Pirling, *Das römisch-fränkische Gräberfeld von Krefeld-Gellep* (Berlin, 1966), II, pl. 117/1.

¹⁴⁸ R. Henning and J. Ficker, *Denkmäler der Elsässischen Altertums-Sammlung zu Strassburg im Elsass* (R. Henning, Von der neolithischen bis zur karolingischen Zeit, vol. 1, Strassburg, 1912), pl. lxxv; F. Garscha, 'Die Bodenfunde der St. Martins-kirche zu Ettlingen', *Badische Fundberichte*, l III (1933-6), 339-44; F. Rexer, 'Céramique des VIIème-IXème siècles découvertes à Bouxwiller', *Soc. d'hist et d'archéol. de Saverne et environs*, xli (1963), 3-4. Cf. also Lobbedey (1968), p. 158-9.

exist, and bowls are the only types known (FIG. 43, nos. 3-5).

ii. Fine fabric with sandy surface, off-white or yellow. Most of these sherds seem to belong to spouted pitchers (FIG. 43, nos. 6-8).

The decorative system of both groups shows great variations, ranging from simple vertical stripes and round arcades in different forms to metope patterns and some combinations. The kiln at Bouxwiller proves that this ware was produced in Alsace. Further, it offers dating evidence: besides painted ware the find mainly contained rouletted ware of Carolingian type, very probably of the 9th century,

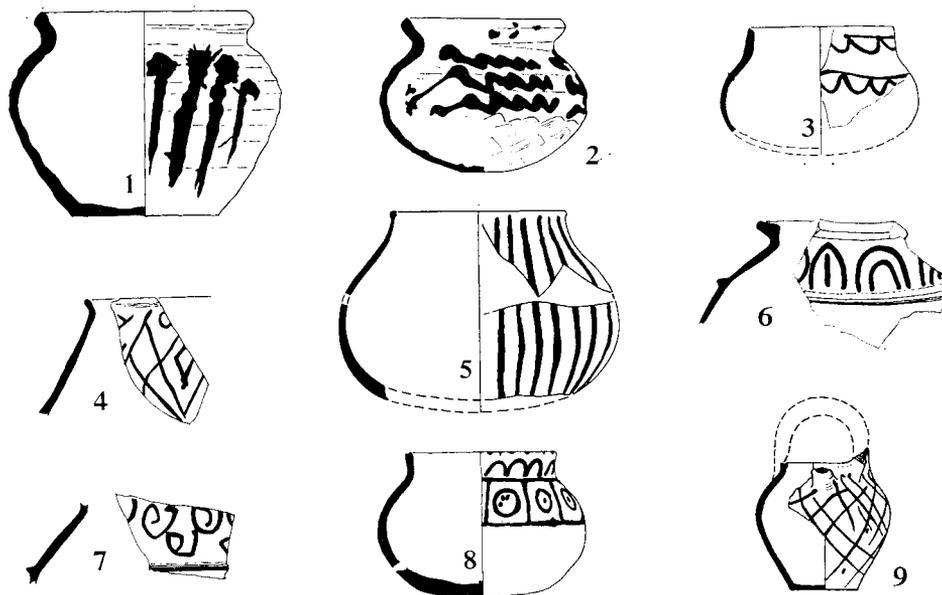


FIG. 43

RED-PAINTED WARES FROM GERMANY. Sc. $\frac{1}{4}$

No. 1, painted ware in manner of Pingsdorf ware, from Worms (Worms, Städt. Kulturinstitut) (p. 124); no. 2, Pingsdorf ware dated by coin-hoard c. 960, from Wermelskirchen (Bonn. Rhein, Landesmuseum) (p. 123); nos. 3-8, Alsatian ware: 3-5 with smooth surface, 6-8 with sandy surface, 3-4 and 6-7 from Strasbourg (Strasbourg, Musée de l'oeuvre Notre-Dame), 5 from Ettlingen (Karlsruhe, Landesmuseum), 8 from Bouxwiller (Bouxwiller town hall) (p. 124 f.); no. 9, Swabian fine ware (*Bügelkanne*), from Esslingen, Neckar (Stuttgart, Staatl. Amt für Denkmalpflege) (p. 125 f.)

or at least not very long after 900. The Strasbourg and Ettlingen finds are of a similar date, although there is no exact stratigraphical evidence. Among the sherds of spouted pitchers developed forms were recognized which suggest a later date, perhaps 11th to 12th century. As far as we know, it was not exported beyond the valley of the upper Rhine.

Red-painted Swabian fine ware ranges in date from the 12th to the 15th century. In the regions of the middle Neckar and of the rivers Jagst and Kocher, besides the common rough medieval wares, a fine light yellow ware, painted red or reddish brown in fine lines mostly forming a lattice pattern and similar to late Pingsdorf decoration, is found (FIG. 43, no. 9).¹⁴⁹ But the shapes and the fabric

¹⁴⁹ Lobbedey (1968), pp. 40 ff. Another late group of this kind is mentioned by Stamm (1962), p. 157.

are clearly independent of Pingsdorf and suggest a French origin. The commonest type is the spouted pitcher with a basket handle (*Bügelkanne*). There are other types of spouted pitchers and jugs, but for no apparent reason most of the finds belong to miniature vessels. This ware first appeared (from stratigraphical evidence) in the 2nd half of the 12th century. From similar evidence and from associated coin-hoards, it is clear that production continued until the beginning of the 15th century. There was not much change of forms during this long period. Kilns are not yet known and the centre of production can not therefore be determined. It was probably somewhere on the middle Neckar.

Two variants of this Swabian ware are worth noting:

- i. Sherds of tiny vessels with brown glaze outside.
- ii. One orange jug decorated with painted white circles, ascribed to the beginning of the 15th century.¹⁵⁰

The second group recalls a group of white-painted pottery from Strasbourg. The fabric is the same as normal Carolingian and Ottonian wheel-thrown ware, but, in contrast to the usual yellow, is dark orange. Wavy lines and similar patterns are painted on the upper side of the rim on a few sherds and on a lid. One rim is also painted with red stripes on the white surface.¹⁵¹ The form and fabric of these sherds indicate a date approximately in the 11th century.¹⁵² Recently C. Neuffer-Müller has drawn attention to a small group of white-painted pottery of Merovingian date from the middle Rhine region.¹⁵³ If independent invention cannot be presumed for all these wares we have to presume streams of tradition, which seem to run underground because the missing links have not yet been discovered.

These few hints may demonstrate the complexity of the problem of painted medieval pottery. Tischler (see above, pp. 99 ff.) has called attention to its relationship with Spanish and Byzantine products. Whether the painting techniques in the Rhineland derive from distant influences or, as I am inclined to think, descended from provincial Roman traditions surviving in Gaul is still undecided. Increasing research, above all in France, will provide us with more precise information, as de Bouard demonstrates (see above, pp. 113 ff).

GLAZED WARE

A thorough examination of Merovingian pottery on the upper Rhine,¹⁵⁴ and of Carolingian and later medieval pottery, which is less advanced,¹⁵⁵ shows that

¹⁵⁰ From the coin-hoard find of Jesingen (Württemberg): E. Schwarzkopf, 'Die Münzfunde von Bopfingen und Jesingen' in *Württembergische Vergangenheit* (Festschrift zur Stuttgarter Tagung des Gesamtvereins der deutschen Geschichts- und Altumsvereine, Stuttgart, 1932), pp. 243-77; Lobbedey (1968), pp. 41, 113-14.

¹⁵¹ Strasbourg, Musée de l'oeuvre Notre-Dame. Cf. R. Forrer, *Strasbourg-Argentorate* (Strasbourg, 1927), I, 142, fig. 142.

¹⁵² Lobbedey (1968), pp. 18, 21-2.

¹⁵³ C. Neuffer-Müller, 'Die rotgestrichene weissbemalte fränkische Keramik des Mittelrheingebietes', *Bonner Jahrb.*, CLXII (1962), 175-87.

¹⁵⁴ W. Hübener, *Absatzgebiete frühgeschichtlicher Töpfereien in der Zone nördlich der Alpen. Beiträge zur Keramik der Merowingerzeit*, (Antiquitas, Abhandlungen zur vor- und Frühgeschichte zur Klassischen und Provinzial-Römischen Archäologie und zur Geschichte des Altertum, 3 ser., VI, Bonn, 1969) 2 vols.

¹⁵⁵ Lobbedey (1968).

the use of glaze did not become common before the 14th century. Very few finds date from the 12th century onwards. There are two early vessels of interest, however, though the dating evidence is very uncertain:

a. Glazed pot from Forstfeld (Alsace),¹⁵⁶ now in Musée de la Ville, Haguenau (Bas Rhin) (FIG. 44, no. 1). It is biconical, light yellow, of rough fabric, wheel-thrown, with a very thick base. The upper part is rouletted in three zones, each zone consisting of several rows of single rectangles. The yellow-brown glaze covers nearly all the interior. On the outside drops of glaze have dribbled from the rim downwards forming an accidental pattern.

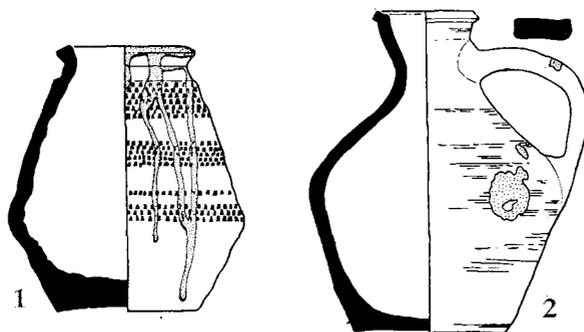


FIG. 44

GLAZED POTTERY FROM UPPER RHINE. Sc. $\frac{1}{4}$

No. 1, biconic pot from Forstfeld, Alsace (p. 127); no. 2, jug from Singen-Hohentwiel, Baden (p. 127 f.)

The fabric and decoration of the vessel corresponds with late Merovingian pottery, especially with the Donzdorf group.¹⁵⁷ Vessels of similar shape occur, for example, in the 7th-century cemeteries at Rill near Xanten and at Trier-Breitenstein, while no analogies can be found among the Carolingian pottery, for example, of Strasbourg. The undamaged condition of the pot from Forstfeld indicates that it comes from a grave. A 7th- or 8th-century date is therefore probable, though not certain.

b. One-handed jug from Singen-Hohentwiel (Baden), now in the Heimatmuseum at Singen (FIG. 44, no. 2).¹⁵⁸ The jug was found in a Merovingian cemetery, but its stratigraphical relationship with a tomb is not quite certain. Two spots of yellow glaze on the body and on the handle of the jug are probably caused by accident, perhaps from another glazed vessel in the potter's workshop. The rough, not very hard, fabric of reddish brown colour makes it unlikely that the glaze spots result from overfiring in the kiln.

Support for the date is given by the fabric with its narrowly grooved surface,

¹⁵⁶ For further references see Lobbedey (1964), p. 130.

¹⁵⁷ Hübener and Lobbedey (1964), pp. 89-95.

¹⁵⁸ Lobbedey (1964), p. 131.

which is typical of the Donzdorf group,¹⁵⁹ and by the fact that one-handled jugs do not occur on the upper Rhine between Merovingian times and the 12th century.¹⁶⁰

Both vessels are very similar to the native pottery of the upper Rhine in the 7th century. Perhaps further excavation will provide better material.

¹⁵⁹ Hübener and Lobbedey (1964), pp. 89-95.

¹⁶⁰ One-handled jugs of Carolingian date are known to me only from Mayen: cf. Hussong (1944), p. 191, fig. 11 bottom. Jugs of Tating type do not come from SW. Germany, as was suggested by D. Selling, *Wikingerzeitliche und frühmittelalterliche Keramik in Schweden* (Stockholm, 1955), pp. 49 ff., 53.

VI. THE NETHERLANDS

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In the present international discussion about the dates of the appearance of painted and glazed pottery in different parts of medieval Europe knowledge of the stratigraphy of settlements and of the wasters from kilns is of decisive importance. In the Netherlands a number of settlements have been excavated which were inhabited intermittently or continuously during the period 800–1200, the period which is relevant to the discussion. Most of the pottery finds in these settlements are local, hand-made globular cooking-pots (*Kugeltöpfe*), but, if the sites are not too far away from the water trade-routes, wheel-thrown, mostly decorated, pottery that was imported from the Rhine and Meuse regions is sometimes also found. Only in an emporium like Dorestad is there predominance of imported pottery over locally made wares. Three pottery-kilns have been excavated in Dutch Limburg, two of which produced wheel-thrown painted and glazed pottery simultaneously, at an early stage of their existence. These kilns are the most northerly outposts of the Rhine and Meuse industries, from which pottery was exported to the Low Countries and as far away as England and Norway.

From both the stratigraphy of settlements and from kiln wasters it may reasonably be concluded that painted pottery in the Pingsdorf manner was made after 1050 and glazed pottery of Andenne type shortly afterwards, i.e. at the end of the 11th century. But there is still no convincing evidence available to demonstrate that both, or either, types, appeared before 1000. At present only the excavations of the kilns are fully published. Detailed information about the settlements at Dorestad, Souburg, Kootwijk and Medemblik should be available in the near future; the reports on Rijnsburg and Den Helder are still unpublished.

STRATIGRAPHY OF SETTLEMENTS

At the settlements of Dorestad,¹⁶² Middelburg,¹⁶³ Medemblik¹⁶⁴ and Den Helder¹⁶⁵ occupation-layers containing Badorf and other imported pottery can be dated 8th to 9th century. Painted Pingsdorf ware is not found in these layers. In a later occupation-layer Pingsdorf, Andenne and Paffrath wares were associated. At Middelburg, Den Helder and Medemblik the earlier layers are separated from the later by a barren layer, which suggests an interruption in the settlement. In

¹⁶¹ Dutch text translated by H. H. Van Regteren Altena and edited by J. G. Hurst.

¹⁶² Information from W. A. van Es, director of the excavations at Dorestad, reopened in 1967 and still in progress.

¹⁶³ J. A. Trimpe Burger, 'Een oudheidkundig onderzoek in de Abdij te Middelburg in 1961', *Ber. R.O.B.*, xiv (1964), 97–133, especially 107.

¹⁶⁴ H. H. van Regteren Altena and J. A. Bakker, 'Opgravingen bij Medemblik', *Westfrieslands Oud en Nieuw*, xxxv (1968), 201–13, especially 203–4.

¹⁶⁵ Unpublished. See *Helinium*, ix (1969), 101 (chronique district B, sub 120—Den Helder).

those settlements where there is continuous habitation there is no clear evidence of a 10th-century layer containing painted ware associated with relief-band amphorae which would prove that painted ware had been imported to the Low Countries before 1000. So far on sites in the Netherlands painted pottery appears only in isolation or in association with imprecisely dated *Kugeltöpfe*, or, generally in the west, with 12th-century partially glazed Andenne ware and/or late 12th-century metallic-grey Paffrath ware.

Although it is highly probable (from the evidence at the settlements) that painted pottery of Pingsdorf type was imported before 1100, there is no firm evidence for it. The technique of painting pottery was already known in the 9th century, for there was painted Badorf ware in the Carolingian layer at Dorestad, and at Zelzate a Carolingian coin-hoard was found in a painted costrel (see above, p. 107 f.). But as yet Pingsdorf vessels which should fill this chronological gap of more than 200 years and so prove continuity of this important technical innovation have not been found.

The opinion of Braat who maintains that glazed pottery also appears by the end of the 9th century must be rejected. It is based on his excavation of a ring-work at Burgh in Zeeland,¹⁶⁶ which was inhabited intermittently from the end of the 9th until the 12th century. Glazed sherds decorated with rouletting, vertical incised lines and applied strips were found. Apparently the good quality dark yellow-brown glaze covered the whole surface of the pots. Braat supposed that these sherds were associated with Carolingian Badorf ware, but could not prove this hypothesis by stratigraphy. His early dating was based, therefore, on the superior quality of the glaze (differing from the partially glazed Andenne ware of the 12th century), and on the rouletting and applied strips which seemed to derive directly from the Carolingian pottery style. Moreover, at the time of his excavation the 9th-century dating of glazed Stamford ware and the erroneous belief that in Hamburg glazed pottery was also found in a 9th-century layer¹⁶⁷ (instead of a 12th-¹⁶⁸) made likely an early dating for glazed pottery found at the mouth of the River Scheldt whence it could have been traded to England and N. Germany.

Since then J. A. Trimpe Burger has found the same glazed ware at other sites in Zeeland but in a well-stratified post-Carolingian context, i.e. in refuge mounds where there are no Carolingian finds.¹⁶⁹ Identical glazed pottery has been found

¹⁶⁶ W. C. Braat, 'Burgh op Schouwen', *Oudheidkundige Mededelingen uit het Rijksmuseum van Oudheden te Leiden* (hereafter, *O.M.R.O.*), xxxv (1954), 8-17; Braat (1960); W. C. Braat, 'De Berg van Troje, het stamslot der heren van Borssele', *O.M.R.O.*, xliii (1961), 138. In the motte at Troje which is also in the province of Zeeland and belongs to the 12th century (with a possible beginning at the end of the 11th century), glazed sherds were found 'but without the rouletting as in Burgh at Schouwen'. For this reason Braat supposes with greater confidence than in his publication of 1960 that rouletting on glazed pottery is characteristic of early wares of the late 9th century.

¹⁶⁷ R. Schindler, 'Die hamburgische Keramik des 8-12 Jahrhunderts als Geschichtsquelle', *Hammaburg*, III (1952), 115-31. The glazed sherds come from layer c, dated about 12th century. See also H. G. Steffens, 'Die Ausgrabungen in der grossen Reichenstrasse zu Hamburg (1953-4)', *ibid.*, iv (1955) 108 and 110.

¹⁶⁸ Hinz (1965), pp. 285-7.

¹⁶⁹ J. A. Trimpe Burger, 'Onderzoekingen in vluchtbergen, Zeeland', *Eer. R.O.B.*, VIII (1957-8) 114-58, especially 135-7.

in Antwerp,¹⁷⁰ at Valkenburg on the Rhine,¹⁷¹ at Tiel on the River Waal,¹⁷² and at Deventer,¹⁷³ all of which can now be dated with some probability to the end of the 11th century because kilns have been found where similar pottery was made.

THE KILNS

Wheel-thrown pottery, painted as well as rouletted and lead-glazed, was produced in kilns on the E. side of the River Meuse in Dutch Limburg at the end of the 11th century.¹⁷⁴ This Limburg pottery industry seems to have started a little earlier with the production of simple hand-made, but often painted, wares. The excavator of the kilns, A. Bruijn, has worked out a typological series of twelve periods continuing until c. 1350. Period A when painted and glazed pottery was, rather unusually, produced simultaneously is the second one. The type sequence is based on the stratigraphy of layers of wasters deposited on crofts and in a stream near the kilns. Some types of the series can be more closely dated because they occur also in two burnt layers of a near-by castle that was burnt down in 1122 and 1329.¹⁷⁵ There are also coin-hoards both of c. 1190.¹⁷⁶ The reliability of historically dated burnt layers is debatable, but the archaeological dating of period A (with the wheel-thrown painted and glazed pottery) in the 2nd half of the 11th century is not contradicted by a carbon-14 date of c. 1070 ± 45 for charcoal from a kiln.¹⁷⁷

It is very remarkable that glazed pottery of this period from kilns at Schinveld and Nieuwenhagen is identical with the white decorated ware, covered over all by glaze, from Zeeland, of which the first specimens were found by Braat at the ring-work at Burgh. The waster heaps in Limburg produced enough material to reconstruct complete forms of this glazed ware. It has sagging bases, collared rims (sometimes hollowed on the inside) or broad, horizontally inverted sharp angular rims, strap-handles, and separately made tubular spouts secured in a hole in the side, well below rim level. The pots and pitchers are entirely glazed on the outside; the colour of the fabric is whitish, the colour of the glaze dark brownish yellow; the decoration consists of one or two rows of rouletted stamps or incised wavy lines

¹⁷⁰ A. Van de Walle, 'Excavations in the ancient centre of Antwerp', *Med. Archaeol.*, v (1961), 123-36, especially 127. Van de Walle ascribes the Antwerp glazed ware with applied strips to 1063 as *terminus ante quem*, because the same material was found at the settlement of Eename (E. Flanders) dated between c. 976 and 1063 by contemporary historical documents. See Van de Walle (1945).

¹⁷¹ T. van Andel, 'Middelleeuwsche ceramiek van Valkenburg Z.H.', *Jaaverlag van de Vereniging voor Terpenonderzoek*, xxv-xxviii (1940-4), 249-62.

¹⁷² P. Glazema, 'Oudheidkundige opgravingen te Tiel', *Ber. R.O.B.*, 1 (1950), 23-5. Sherds 21 and 34 have a very fine glaze.

¹⁷³ A. Dorgelo, 'Het oude bisschopshof te Deventer', *Ber. R.O.B.*, vii (1956), 39-80, especially 75.

¹⁷⁴ A. Bruijn, 'Nieuwe vondsten van middeleeuws aardewerk in Zuidlimburg', *ibid.*, xiv (1964), 133-49; *id.*, 'Een middeleeuwse pottenbakkersoven te Nieuwenhagen', *ibid.*, xv-xvi (1965-6), 169-83. The glazed wares from Nieuwenhagen have all the characteristics of period-A sherds from Schinveld, except for the rouletting. Bruijn dates this kiln 12th century.

¹⁷⁵ J. G. N. Renaud, 'Enkele opmerkingen over het bodemprofiel en de middeleeuwse scherven op de burcht Valkenburg, Limburg', *ibid.*, viii (1957-8), 172-8.

¹⁷⁶ Bruijn (1960-1), especially p. 507; Bruijn (1965), p. 8.

¹⁷⁷ GrN-4835, Nieuwenhagen: J. C. Vogel and H. T. Waterbolk, *Radiocarbon*, ix (1967), 139. According to the calibration curve by M. Stuiver and H. E. Suesse (*ibid.*, viii (1966), 538) this would, however, correspond to a true age of about 1080-1220. Irregularities of this curve do not allow for a further specification.

on shoulder, neck and rim, and vertical strips ridged in section.¹⁷⁸ Because of a certain resemblance in form and decoration with Andenne ware in general, Bruijn thinks this glazed pottery was made by potters who had temporarily emigrated from Andenne (which also lies on the E. side of the Meuse some hundred km. south), and that they introduced the potter's wheel and the invention of glaze to Dutch Limburg. Theoretically, the reverse might also be true, because the exact date of the beginning of the Andenne industries, generally dated in the 12th century, is unknown. The potters might have settled in Limburg first and afterwards emigrated to Andenne. In the next period the techniques of the potter's wheel and of glazing went out of use again in Dutch Limburg, the latter to be 'rediscovered' only in the 2nd quarter of the 14th century. In the 12th century partially glazed pottery seems to have been imported to the Low Countries from Andenne only.

CONCLUSION

In the Netherlands wheel-thrown unglazed, but only very rarely painted, pottery is a well-known import from 9th-century settlements specially along the great rivers and the coast of the North Sea. Wheel-thrown painted and glazed imports can be demonstrated from the late 11th century onwards. The first group represents Carolingian trade from the Rhineland by way of the Low Countries to England and Scandinavia. The second group follows the same trade-routes,¹⁷⁹ but distribution becomes denser in the 12th century and spreads gradually to the Pleistocene higher ground (in the northern provinces of Groningen and Drente, exclusively Pingsdorf, no glazed wares) and to the Holocene fenlands in the western parts of the country, which have been reclaimed since *c.* 1000. In the Holocene coastal area painted and/or glazed 12th- and 13th-century Andenne-type sherds are often found on the low early dunes, which are covered by the very high later dunes, and in the fenlands under later clay sediments. On the other hand, they are not found in late 13th- and 14th-century levels, e.g. in castles or in new towns.

Between the 10th and the 2nd half of the 11th century the Netherlands, at least, are very obscure as far as medieval ceramics are concerned. There is no convincing evidence that at this time the import of painted and glazed pottery, together with relief-band amphorae, influenced the common Dutch kitchen ware of black-grey hand-made pottery. The Low Countries do not, therefore, appear in the archaeological record as an important W. European trade connexion for transport of the knowledge of lead glaze from Byzantium to England at the end of the 9th century, as has recently been restated.¹⁸⁰

Although it cannot be proved a continuity of painting technique after the invention of painted Badorf ware in the 9th century is not unlikely. The best argument for this conjecture comes from W. Germany where Pingsdorf ware can now be dated after *c.* 960 (see above, p. 123). This at least makes it possible to halve the gap of two centuries which the evidence from Dutch settlements and kilns suggest.

¹⁷⁸ Dunning (1959), p. 62.

¹⁷⁹ Hübener (1959), p. 130; Dunning (1968), p. 36.

¹⁸⁰ Lobbedey (1968), p. 81.

VII. SPAIN

by JUAN ZOZAYA¹⁸¹*Curator of the Provincial Museum, Soria*

Although architecture has been the centre of interest in the study of the Spanish middle ages, and pottery and metalwork have been little studied except from an aesthetic point of view, and then mostly in examples from the dealers' market, there is now a growing interest in the general study of the material culture of the medieval period, so far without definite results. This note is based on work done by Drs. Almagro, Castillo, García Guinea and Palol Salellas, and on my own experience which has not, unfortunately, been acquired in excavations. At present certain sites are important for knowledge of medieval pottery: El Castellar,¹⁸² Cildá,¹⁸³ Castro de Yecla,¹⁸⁴ Jengibres¹⁸⁵ and León¹⁸⁶ in the central region of Spain, and Vilosíu¹⁸⁷ and Ampurias¹⁸⁸ in Catalonia. Other sites, such as Marialba (León),¹⁸⁹ are being excavated and their final reports have yet to be written. Older reports have to be restudied as findings are reassigned to medieval settlements.¹⁹⁰ Other data come from Visigothic cemeteries, which seldom yield important information.¹⁹¹ Because of these inadequacies only a very basic classification of pottery between the 7th and 10th centuries can be attempted.

UNGLAZED PLAIN AND PAINTED WARES

I. VISIGOTHIC

This black ware, containing much mica and quartz, is easily confused with Hallstat pottery. It is found, for example, in Esgueva¹⁹² and in Cildá,¹⁹³ where it was made probably until the 13th century.

¹⁸¹ Spanish text translated by J. Zozaya and edited by J. G. Hurst.

¹⁸² García Guinea *et al.* (undated).

¹⁸³ García Guinea *et al.* (1966).

¹⁸⁴ González Salas (1945).

¹⁸⁵ This site is some 25 miles N. of Madrid, in the Sierra de Guadarrama, near Manzanares el Real, in the granite zone of the Pedriza. It is now practically destroyed by a stone quarry. Some sketches remain of its plan and some pottery has been recovered.

¹⁸⁶ Recent excavations by A. García y Bellido, who most kindly left the medieval pottery aside for me to study.

¹⁸⁷ A. del Castillo, 'El manso medieval A de Vilosíu', *Homenaje a Jaime Vicens Vives*, 1 (Barcelona, 1965), 219-28.

¹⁸⁸ M. Almagro, 'Excavaciones en la Palaiapolis de Ampurias', *Excavaciones Arqueol. en España*, xxvii. The medieval finds should be compared with those from southern France and from the medieval city of Barcelona, at present being excavated, but as yet unpublished.

¹⁸⁹ The main features of the Marialba pottery are yet to be determined. The latest publication is T. Hauschild, 'La Iglesia martirial de Marialba (León)', *Boletín de la Real Academia de la Historia*, clxiii (1958), 243-8.

¹⁹⁰ Until recently when a revision was started on the finds from northern Spain, painted pottery was considered as belonging to the so-called Cantabro-Roman phase. García y Bellido, who long defended this theory, has now asked me to join him in the reinterpretation of all this material as medieval. Two examples are published in A. García y Bellido, A. Fernández de Avilés, A. Balil and M. Vigil, 'Herrera de Pisuerga. 1, Campanã: 1960', *Excavaciones Arqueol. en España*, 11 (Madrid, 1962), figs. 37-40, and García y Bellido *et al.* (1956), figs. 38, 40, 42, 43 and 58.

¹⁹¹ H. Zeiss, *Die Grabfunden der Spanischen Westgotischen Reich* (Berlin, 1934).

¹⁹² Llubíá Munné (1967), fig. 7.

¹⁹³ García Guinea *et al.* (1966), pl. xv, no. 5, and fig. 6, no. 4.

2. HISPANO-ROMAN

A second type is a red-coloured ware, stemming from *sigillata hispanica* and from Type D *sigillata chiara*, from whose shape it evolves. Examples are the plate found in Alovera,¹⁹⁴ the small pot from Martos (Jaén)¹⁹⁵ and the bowls evolved from Draggendorf 29 that were found in León.¹⁹⁶ This pottery is much in the style of C. Thomas's sub-Roman type A.¹⁹⁷

Types 1 and 2 are found throughout practically all Spain, and may therefore be dated before 711.

3. HISPANO-BYZANTINE

On the SE. coast near Almería pottery sherds with a very Byzantine flavour have been found. Characteristic of these is a coarse, white ware, stamped and painted with parallel, wavy stripes, which was found by Luis Siret in excavations at Montroy, near Villaricos (unpublished).¹⁹⁸ These sherds seem to be related to the finds in San Pedro Alcántara, a Byzantine establishment near Málaga.¹⁹⁹ The type from Montroy may be called Hispano-Byzantine, if we follow Martínez Santa-Olalla's systemization of the Visigothic period, and would belong to the period between 621 and 711.²⁰⁰ Some of this pottery may have penetrated into the interior of the country, even as far as Toledo, much as some metal artifacts did.²⁰¹ This would probably explain the existence of early painted ware in N. Spain, although it is definitely of eastern Mediterranean origin.²⁰²

4. BERBER

After the Arab conquest of 711, new types of pottery appear, in which there is a clear distinction between those to the north and those to the south of the Cordillera central mountain zone between the valleys of the rivers Tagus and Douro. To the south, reaching occasionally into Catalonia (Lérida and Colliure), a dish painted in red, with a variant in brown over whitish buff, is typical; sometimes the buff is greyish. The pattern consists of vertical stripes, possibly symbolizing the word *Allah* or the hand of Fatima. This ware runs from c. 750 to c. 1250, one example in Mallorca having been dated by carbon-14 to 960 ±

¹⁹⁴ L. Vázquez de Parga, 'Informe provisional sobre las excavaciones arqueológicas en Azuqueca (Guadalajara). Finca de Acequeilla. Termina de la Cabaña', *Noticiario Arqueol. Hispánico*, vii (1963), figs. 11-12.

¹⁹⁵ Llubíá Munné (1967), fig. 4.

¹⁹⁶ The pieces come from the square in front of San Isidoro Church (publication forthcoming).

¹⁹⁷ C. Thomas, 'Imported pottery in dark-age western Britain', *Med. Archaeol.*, iii (1959), 90-1, 94.

¹⁹⁸ This is similar to part of a deposit in the Museo Arqueológico Nacional, Madrid. The late pieces have not yet been published.

¹⁹⁹ Especially a small jug from this cemetery, also in the Museo Arqueológico Nacional, Madrid. The latest work on this problem is W. Hübener, 'Zur chronologischen Gliederung des Grabfeldes von San Pedro Alcántara (Vega del Mar (Prov. Málaga))', *Madrid. Mitteilungen*, vi (1965). The jug is illustrated on fig. 42.

²⁰⁰ J. Martínez Santa-Olalla, 'Esquema de la arqueología Visigoda', *Investigación y Progreso*, viii (1934), 109.

²⁰¹ J. Zozaya, 'Ensayo de una tipología y una cronología', *Archivo Español de Arte*, xl (1967), 135-7, fig. 2, pl. i, b.

²⁰² Whitehouse (1965) and Whitehouse (1966) are very important for an understanding of this problem. However, I suggest that after the 8th century a strong influence came from the Orient to Germany, using the well-known Danube-Rhine trade-route, and penetrating Spain by way of the Cantabrian coast.

80.²⁰³ The origins of this type of ware may lie in the N. African-Byzantine tradition which was assimilated by the Berbers and might be called Berber (FIG. 45, no. 4), as it resembles that at present made in N. Morocco by the Tsoul tribe. It may have been imported by the Berbers who joined the Arab conquest of Spain.

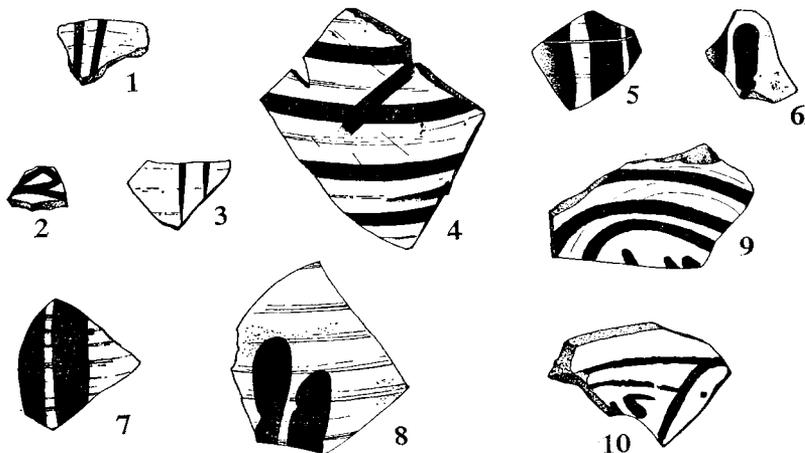


FIG. 45

9TH- AND 10TH-CENTURY RED-PAINTED AND GLAZED WARES FROM SPAIN. Sc. $\frac{1}{2}$

Nos. 1-8, red-painted: 1-3, Germanic white ware from El Castellar (p. 135 f.); 4, Berber ware with reddish slip, from Mejorada del Campo (p. 134 f.); 5-8, various wares decorated with vertical stripes, 5-6 from Alcalá de Henares, 7-8 from Jaén. Nos. 9-10, glazed ware decorated in black over honey-brown slip, 9 from Alcalá de Henares, 10 from Villaviciosa de Odón (p. 136)

5. GERMANIC

In contrast to Berber ware another which I propose to call Germanic is red or sandy-coloured of medium quality and painted in brown over white creamy buff (FIG. 45, nos. 1-3).²⁰⁴ On Berber ware the wheel caused sharp undulations; on Germanic ware they are rounded. This ware first appeared in the 9th century and may have lasted until the 12th century. It could conceivably be related to Pingsdorf ware, as it is not found south of the Cordillera central mountains and very rarely south of the River Douro. It is usually associated with medieval camps that probably originated during the so-called depopulation of the Douro valley. This would give a date between 753 and 893,²⁰⁵ when Alfonso I repopulated the *campi gotorum* on the N. shore of the Douro. After this the land between the Douro and the mountains was eventually resettled.

The paint of this Germanic ware is applied in thin stripes, sometimes following a criss-cross pattern (PL. XIII, A), sometimes not, but the lines are always thinner than on Berber ware. The predominant shapes are bowls and cups; no big

²⁰³ G. Roselló-Bordoy, W. Waldren and J. S. Kopper, 'Análisis de Radiocarbono en Mallorca', *Trabajos del Museo de Mallorca*, 1 (1967), 8. This dating experiment was very fruitful.

²⁰⁴ *Op. cit.* in note 201. This explains the use of the term Germanic, which may also be used to describe the ethnic origin of the Christian Spaniards who offered armed resistance to the Muslim invasion.

²⁰⁵ The theory, based on documents and at present dominant, is that the Douro valley was completely depopulated during these years. Archaeological evidence may yield different results.

plates are known. The impression is that the inhabitants of these *campi* had a very restricted economy, and produced their own pottery. Examples of these *campi* have been found in Castillo del Moro (Santander),²⁰⁶ Retortillo (Santander),²⁰⁷ Cildá,²⁰⁸ El Castellar (Palencia),²⁰⁹ and related types in León²¹⁰ and Jengibres (Madrid),²¹¹ although the last site may be late Roman. Similar sherds have been found in the city of Palencia and on an unidentified site in the province of Segovia.

6. NORTHERN

Another type, sometimes very coarse, which may be called Northern ware, lacks a slip and is normally burnished. It is commonly decorated with short slashes that may stretch from one side to the other on the handles.²¹² Variants in Asturias have parallel slashes and sometimes, as, for example, at Cildá²¹³ may be stamped with a criss-cross pattern or with a palmette derived from that on *sigillata chiara*.

GLAZED WARE

Glazed ware may be monochrome, bichrome or polychrome, of which the last shows considerable Byzantine influence in its decoration, and the first two are generally honey-coloured. The zone of influence of all three extends as far north as the Douro valley. Efforts made to classify glazed ware may be accepted in principle until more is known about their production centres. Those at Córdoba, Pechina (Almería), Toledo, Alcalá de Henares (FIG. 45, nos. 9–10) and a few other places have been fairly certainly located, but the kilns and sites remain unexcavated.²¹⁴ It is necessary, therefore, to be sure whence imports came. Wares imported from Egypt²¹⁵ and some fragments of Chinese porcelain of the Sung dynasty²¹⁶ are well known. Decoration on pottery from Madinat-al Zahara certainly has an affinity with oriental patterns, especially with Byzantine examples, and we know that artisans from Byzantium worked in the royal kilns. From these groups stemmed the larger factories at Málaga, Manises, Teruel and Muel, famous all over Europe.

I hope this contribution will help to acquaint scholars outside Spain with our medieval pottery and induce those in Spain to probe with greater depth into this field.²¹⁷

²⁰⁶ García y Bellido *et al.* (1956), pp. 172–3, fig. 58, A–D and G.

²⁰⁷ García y Bellido *et al.* (1956), p. 154, figs. 38, 40, 42 *et al.*

²⁰⁸ García Guinea *et al.* (1966), fig. 17, no. 7.

²⁰⁹ García Guinea *et al.* (undated), figs. 8, no. 7, 9, no. 1, and 17, no. 3.

²¹⁰ The fragments come from the square in front of the cathedral at Palencia. They were excavated by Palol and are not yet published.

²¹¹ González Salas (1945).

²¹² García y Bellido *et al.* (1956); García Guinea *et al.* (undated); García Guinea *et al.* (1966). There are also many examples in the archaeological museums at Oviedo and Santander, but they have never been studied.

²¹³ García Guinea *et al.* (undated), figs. 4–6.

²¹⁴ M. Gómez-Moreno, *El arte árabe español hasta los Almohades. Arte mazarabe* (Ars Hispaniae, III, Madrid, 1951); E. Camps Cazorla, *Catálogo Sumario del Museo Arqueológico Nacional. Cerámica española (Nuevas instalaciones)* (Madrid, 1936).

²¹⁵ Alice Wilson Frothingham, *Lustreware of Spain* (New York, 1951), pp. 9–15.

²¹⁶ J. Zozaya, 'El comercio de al-Andalus con el Oriente: nuevos datos', *Boletín de la Asociación Española de Orientalistas*, v (1969), 191–200.

²¹⁷ Acknowledgments are due to L. Caballero, A. García y Bellido, M. García Guinea, J. G. Hurst, D. B. Whitehouse and C. Zozaya.

VIII. ITALY

by D. B. WHITEHOUSE*Wainwright Fellow in Near Eastern Archaeology, University of Oxford*

The starting point for this review is a series of articles published between 1965 and 1968, in which I described the evidence then available for the origin and date of red-painted ware and earliest glazed pottery in medieval Italy.²¹⁸

RED-PAINTED POTTERY

I divided the painted pottery into three major groups:

1. The earliest painted pottery:
 - a*, with elaborate, sometimes zoomorphic, decoration;
 - b*, with simple loops and arcs.
2. Pottery with broad-line decoration.
3. Pottery with narrow-line decoration.

Here I shall catalogue recent discoveries of broad- and narrow-line pottery and discuss groups 1, *b*, 2 and 3. No new examples of group 1, *a*, have come to light and it remains an isolated type of 'early Christian' pottery.²¹⁹ As in 1966, no painted pottery has been reported farther north than Fiesole and there are only two find-spots north of Viterbo. Although the density of finds in Lazio and N. Apulia undoubtedly reflects the density of archaeological activity in these areas, painted pottery does appear to be a phenomenon of the central and southern provinces, a distribution which must effect our view of its possible diffusion from Italy to NW. Europe.

POTTERY WITH BROAD-LINE DECORATION

In 1966 I distinguished between the earliest pottery with simple ornament (group 1, *b*), which appeared to be early Christian in date, and the rather late wares with broad-line decoration (group 2). It is clear now that this distinction was groundless; the early Christian pots from Sicily are simply early examples of the broad-line wares of the Italian mainland, and all belong to group 2 of the general classification.

There are nine new find-spots for broad-line pottery (FIG. 47):

- | | |
|-----------------|---|
| <i>Calabria</i> | 1. Rossano (Cosenza) ²²⁰ |
| <i>Campania</i> | 2. Pozzuoli (Naples) (PL. XIII, B) ²²¹ |
| | 3. Lacco Ameno, Ischia (Naples) ²²² |

²¹⁸ Whitehouse (1965); Whitehouse (1966); Whitehouse (1968).

²¹⁹ The term 'early Christian' here refers to the period between the 4th and the 7th centuries.

²²⁰ Rossano, Museo Diocesano. For one jar, which in addition to painted stripes bears a splash of glaze, see Whitehouse (1968), p. 46.

²²¹ Department of Greek and Roman Antiquities, British Museum. Two jugs, inv. nos. WT 430 and WT 431, which were bequeathed to the museum by Sir William Temple in 1856. I am grateful to D. M. Bailey for drawing my attention to them.

²²² I am grateful to the excavator, G. Buchner, for information about a jug from an early Christian grave on Monte Vico, and to J. Ward Perkins for sending me a sketch of a second jug seen in the Antiquarium attached to the church of Santa Lucia at Lacco Ameno.

4. Eclano (Avellino)²²³
 5. Atripalda (Avellino)²²⁴
Apulia
 6. Santa Maria di Ripalta, Cerignola (Foggia)²²⁵
 7. Masseria Masselli, San Severo (Foggia)
 8. Masseria Sant'Andrea, San Severo (Foggia)
 9. Falciglia (Foggia)

Taken with the old, the new discoveries make possible a much more coherent account of broad-line pottery than was possible previously. Although many of the finds lack any kind of archaeological pedigree, several pieces come from dated contexts and others may be dated by analogy with objects found elsewhere. Four vessels were found in early Christian cemeteries which, although not closely dated, almost certainly fall between the 4th and 7th centuries: Monte Sabucina, Mimjani, Lacco Ameno and Rossano. In addition, the jug from Syracuse is paralleled by a plain vessel from the near-by Grotticelli cemetery, the jug from Orvieto by vessels from the cemeteries at Nocera Umbra and Castel Trosino,²²⁶ and the gouged ornament found on a painted jug from Atripalda by vessels from a cemetery at Cotominello.²²⁷ San Antonio Casalini, Altripalda and Eclano have all yielded biconical jugs with a trefoil mouth which resemble 6th- and 7th-century vessels from Athens.²²⁸ At Lucera, broad-line jugs recalling both the form and ornament found at San Antonio Casalini were associated with a sherd of Forum Ware (see below, p. 141 f.) and a *denier* of Charlemagne minted *c.* 800. In short, it appears now that my distinction between groups 1, *b*, and 2 was unjustified and that both belong to a single class of broad-line pottery current in Sicily and S. Italy, with only rare examples farther north, and range in date from the early Christian period until some time after *c.* 800.

POTTERY WITH NARROW-LINE DECORATION (FIG. 46)

Pottery decorated with narrow stripes, spirals and crosses occurs throughout the central and southern provinces, with find-spots concentrated (predictably) in Lazio and Apulia. With the exception of the 'Islamic' amphorae from Palermo,²²⁹ none has been reported in Sicily and it may well be confined to the Italian mainland. The finds from Lazio consist almost entirely of small fragments and comparison with material from the south is difficult. Nevertheless, similarities exist, suggesting that all the narrow-line wares belong to a single group, within which regional variants occur.

²²³ Avellino, Museo Irpino. I am grateful to the Director of the Museum, Dr. Grilla, for sending me information about this discovery.

²²⁴ Avellino, Museo Irpino.

²²⁵ This, and the remaining finds listed here, were discovered and described to me by V. Russi, to whom I offer my thanks.

²²⁶ Ida Baldassarre, 'Le Ceramiche delle necropoli longobarde di Nocera Umbra e Castel Trosino', *Alto Medioevo*, I (1967), 141-85, notably no. 22 on p. 149, and no. 29 on p. 155.

²²⁷ P. Orsi, 'Byzantina Siciliae', *Byzantinische Zeitschrift*, XIX (1910), 63-90, especially fig. 22 on p. 86.

²²⁸ Henry S. Robinson, *The Athenian Agora, V. Pottery of the Roman Period. Chronology* (Princeton, 1959), pp. 116 ff., especially no. M362, and p. 121, especially no. 6.

²²⁹ I have also omitted discussion of the anomalous painted pottery from Lipari. For both finds see Whitehouse (1966), p. 40.

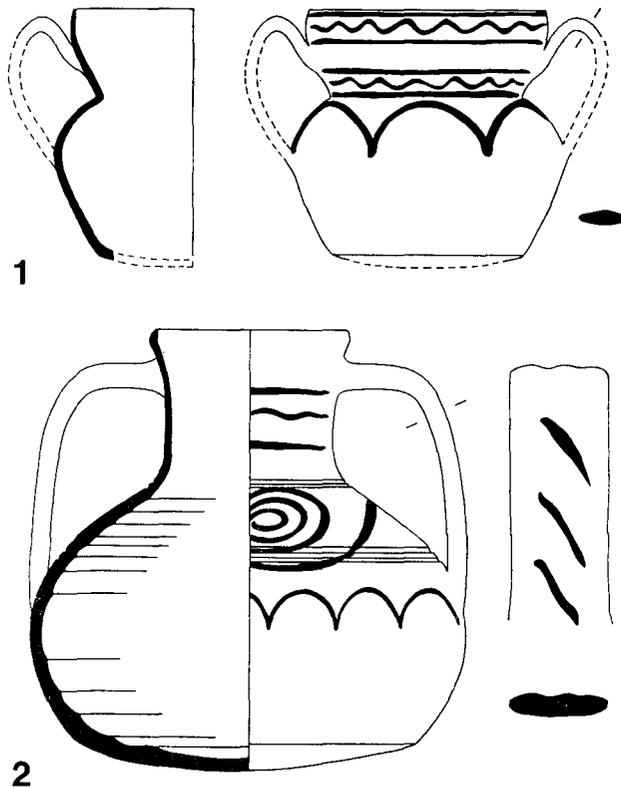


FIG. 46
LUCERA CASTLE, ITALY
Narrow-line painted pottery (pp. 138 ff.). Sc. $\frac{1}{4}$

Eleven find-spots may be added to the list published in 1966 (FIG. 48):

- | | |
|-----------------|--|
| <i>Lazio</i> | 1. Rome, from the vault of a cloister attached to the basilica of San Paolo fuori le Mura between 1193 and 1241 ²³⁰ |
| | 2. Tuscania (Viterbo) ²³¹ |
| | 3. Castel San Savino ²³² |
| <i>Campania</i> | 4. Frigento (Avellino) ²³³ |
| <i>Apulia</i> | 5. Rocavecchia (Lecce) ²³⁴ |

²³⁰ G. B. Giovenale, 'Il Chiostro medioevale di San Paolo fuori le Mura', *Bull. della Commissione Archaeol. comunale di Roma*, xlv (1918), 125-67, especially fig. 6 on p. 136, and p. 138.

²³¹ Collected by members of the British School at Rome.

²³² Grid. ref: 380032. In addition to painted pottery, surface collecting has yielded 13th-century maiolica, but only one sherd of sparse glazed ware. It is probable, therefore, that the material is mostly of the 13th century or later.

²³³ Avellino, Museo Irpino.

²³⁴ Mario Bernardini ('Gli Scavi di Rocavecchia dal 1945 al 1954', *Studi Salentini*, 1 (1956), 20-65) published several apparently medieval sherds among the iron-age painted wares from the site. See especially fig. 34 on p. 53, and fig. 38 on p. 57. The site also yielded Byzantine coins (p. 22) and other medieval material.

6. Siponto (Foggia)²³⁵
7. Masseria Ratino, San Severo (Foggia)²³⁶
8. Masseria Sant'Andrea, San Severo (Foggia)
9. Casalorda, San Severo (Foggia)
10. Motta della Regina, San Severo (Foggia)
11. Celanza Valfortore (Foggia)

In Lazio the most important evidence for the appearance of narrow-line ware is still from Santa Cornelia, where sherds occur first in period 2, which began *c.* 780 and ended considerably before *c.* 900. The single painted jug from San

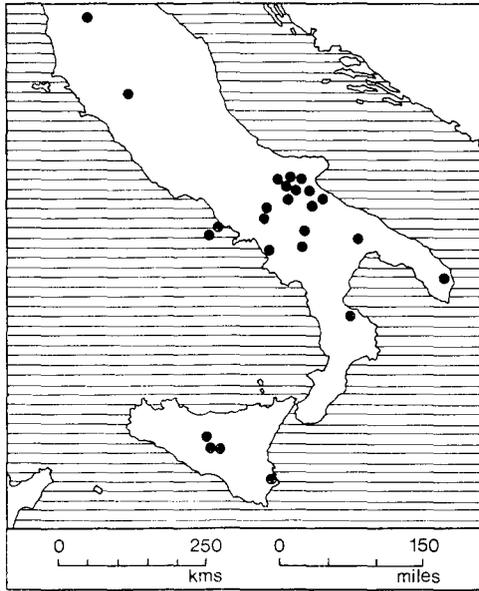


FIG. 47

MAP SHOWING DISTRIBUTION OF
BROADLINE PAINTED POTTERY IN
ITALY



FIG. 48

MAP SHOWING DISTRIBUTION OF
NARROW-LINE PAINTED POTTERY
IN ITALY

Paolo fuori le Mura at Rome and the large collection of surface finds from San Savino show that narrow-line wares were still in use in the 13th century. Unfortunately, the position in Apulia is less clear. My earlier account of painted ware was written before the second season of excavations at Lucera Castle, during which abundant narrow-line pottery was found. Much of this came from deposits where glazed pottery was completely absent. Glazed wares were introduced at Lucera about the beginning of the 13th century; the painted sherds must therefore be earlier than *c.* 1200. How much earlier is uncertain, although they were

²³⁵ Foggia, Museo Provinciale.

²³⁶ This, and the finds which follow, were collected by V. Russi: cf. note 225.

certainly unknown in the early 9th century. Narrow-line wares were common in Apulia until at least *c.* 1300 and in Basilicata they were still used at Satriano (Potenza) when the settlement was destroyed in 1420.

The present evidence suggests, therefore, that narrow-line pottery may be restricted to central and southern Italy. Although its early occurrence in Lazio is consistent with the hypothesis of an Islamic origin proposed in 1966, its absence from Sicily seriously undermines this view and I believe an alternative explanation should be sought.

GLAZED POTTERY

Knowledge of glazed wares has changed little since 1968: the earliest glazed pottery is still Forum Ware, which was made in Rome in the late 8th and early 9th centuries. However, recent discoveries in Lazio add detail to the picture and prompt a résumé of what is known.

Even the most recent Italian writers persist in the view that glazed pottery was made continuously in Italy from the Roman period onwards. As evidence of this they cite the alleged occurrence of glazed vessels in a 7th-century tomb at Tharros (Cagliari) in Sardinia and of 'early medieval' glazed wares in Liguria and other provinces of northern Italy. As I argued in 1968, the evidence from Tharros cannot stand: the pots are unequivocally Roman and their supposed association with coins of Justinian (527–65) and Heraclius (610–41) should be blamed on unscrupulous dealers.²³⁷ Likewise, the glazed pottery from northern Italy is of Roman rather than medieval date.²³⁸ Indeed, there is not a single piece of undoubted 6th- or 7th-century glazed pottery in the W. Mediterranean, and therefore there is no positive evidence at present for continuity anywhere in the Mediterranean basin.²³⁹

FORUM WARE

In 1968 the Museo di Roma opened a permanent exhibition of medieval and renaissance pottery. The exhibition includes important examples of Forum Ware,

²³⁷ Whitehouse (1968), pp. 46–7. For a 1st-century parallel for one of the vessels see Francisca Pallarés Salvador, 'La Necropoli romana de via Cappuccini a Sanremo', *Rivista Ingauna e Intemelina*, n.s. xvi (1961), 71–80, especially no. 8 on p. 74.

²³⁸ Grosso (1958), p. 22, describes two types of glazed pottery from layer F, one of which is supposedly 'early medieval' in date. However, the other type is 13th-century or later sgraffito ware and the deposit is either contaminated or considerably later than the excavator believed. Nino Lamboglia (*Gli Scavi Di Albintimilium e la Cronologia della Ceramica romana*, 1, *Campagna di Scavo 1938–40*, monographs of the Instituto Internazionale di Studi Liguri, Bordighera, 1950) states (p. 202) that the glazed pottery from Ventimiglia falls into two groups: i, 1st century B.C.; ii, 4th and 5th centuries A.D., but *not* later than *c.* 450. Note, however, the puzzling find from the Valle Pega, near Comacchio in the Veneto, published by Nereo Alfieri, 'La Chiesa di Santa Maria in Padovetere nella zona archeologica di Spina', *Felix Ravenna*, 3 ser., XLIII (December 1966), 5–52. The find is a biconical spouted jug with a lid, from a cemetery near the church of S. Maria. Both jug and lid are decorated with applied petals and covered with brownish glaze. Alfieri compared the vessel with sherds illustrated by Lamboglia, *op. cit.*, p. 174 and fig. 100, but it may be a local variant of Forum Ware, as others suggest.

²³⁹ The evidence, of course, is uneven. For Istanbul see Whitehouse (1968), p. 44. J. Hayes has kindly discussed with me the important pottery discovered during excavations at St. Polyuktos, Istanbul, where glazed pottery reappeared in the late 7th century. G. Scanlon, of the American Research Center in Egypt, tells me that glazed pottery appeared first at Fustat towards the end of the 7th century.

among which are two pieces which support the view that it was made under strong Byzantine influence. The pieces are a fragmentary jug decorated in relief with human figures representing the months of the year (PL. XIV, A), and a lid with applied scales. Both have parallels among 9th-century glazed wares from Corinth.²⁴⁰ There is, therefore, good reason to suppose that the technique of glazing pottery was reintroduced to Italy from Byzantium and that it flourished, according to the evidence from Santa Cornelia, from some time before c. 780 until the middle of the 9th century.

POTTERY WITH A SPARSE GLAZE

Forum Ware was replaced in Lazio by pottery finished by applying irregular splashes of glaze. Occasionally vessels were decorated with loops and spirals of glaze (PL. XIV, B). I described this 'pottery with a sparse glaze' in 1968, suggesting that it was developed in the 9th century and remained in use until c. 1200, or slightly later. Two recent discoveries confirm that it was still used in the 12th century: at Riofreddo at least one jug was built into an arch in the narthex of San Giorgio c. 1150, and at Rome several vessels were used in the construction of a vault over the entrance to the Abbazia delle Tre Fontane between 1138 and 1150.²⁴¹

CONCLUSIONS

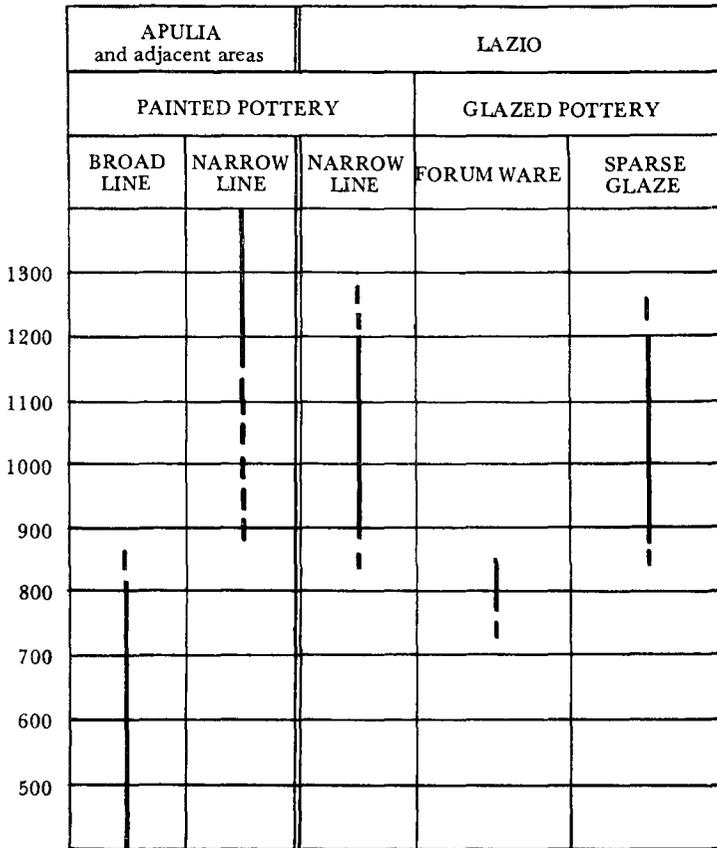
Present knowledge of the painted wares and the earliest glazed pottery of medieval Italy may be summarized in the table opposite.

As was known in 1966, two principal types of painted pottery occur: broad-line wares, with a distribution concentrated in the south, and narrow-line wares, found in both south and central Italy. Broad-line pottery appeared first in the early Christian period and was still in use in the 9th century. Narrow-line pottery appeared in Lazio in the 9th century and may have arrived in Apulia at a similar date, although the earliest excavated examples simply have a *terminus ante quem* of c. 1200. In both regions, narrow-line pottery was still made in the 13th century, and in the mountains of Basilicata it was still in use in 1420.

The earliest undoubted medieval glazed pottery is still Forum Ware, which was made in Rome in the 8th and 9th centuries. Repeated claims that glazed pottery of an earlier date occurs elsewhere in Italy cannot be proved and it is highly probable that the technique of glazing pottery was lost in the 5th century and reintroduced from Byzantium shortly before c. 780. During the 9th century Forum Ware was replaced in Lazio by pottery with a sparse glaze, which remained in use until c. 1200, or even later.

²⁴⁰ Mazzucato (1968), especially fig. 2 on p. 149, and fig. 5 on p. 151. Compare Charles H. Morgan II, *Corinth, XI. The Byzantine Pottery* (Princeton, 1942), pls. ia, ii and iii for plastic ornament, and fig. 28 on p. 40 for a lid with petal decoration. I am very grateful to O. Mazzucato for providing the photographs reproduced on PL. XIV.

²⁴¹ Mazzucato (1968), p. 153.



APPENDIX

RECENT DISCOVERIES IN ITALY

V. Russi has kindly provided me with information on five new discoveries of painted pottery in the province of Foggia, and A. Luttrell has drawn my attention to his find in the province of Bari, Apulia (see above, pp. 137 ff., especially the distribution-maps on p. 140). The new find-spots are as follows:

POTTERY WITH BROAD-LINE DECORATION

- Apulia*
1. Masseria Ratino, San Severo (Foggia)
 2. San Vito (Foggia)
 3. San Stefano, Monópoli (Bari)

POTTERY WITH NARROW-LINE DECORATION

- Apulia*
1. Masseria Casonetto, San Severo (Foggia)
 2. Monte Castellaccio, Troia (Foggia)
 3. Motta Panetteria, San Severo (Foggia)

IX. THE EASTERN MEDITERRANEAN GLAZED POTTERY

by R. B. K. STEVENSON²⁴²

Keeper, National Museum of Antiquities of Scotland

I would not agree that Forum Ware can be a link between Byzantium and Stamford for, as I said in 1954,²⁴³ Forum Ware is somewhat primitive, while good quality Stamford ware certainly is not. Forum Ware is also earlier (8th- to 9th-century) and belongs to the same stage as the late 8th-century (?) pottery (the apparently associated coins were late 7th-century), which at Constantinople is earlier and more primitive than late 9th-century parallels at Stamford. I see no likelihood of the technical improvements and developments taking place in Italy, rather than farther east, and spreading from Italy both to Stamford and Constantinople. There is as yet no evidence for good quality Stamford-type wares in Italy; in fact there is a deterioration from the late 9th century onwards (sparse glazed ware). If this was the type of pottery in use in central Italy in the 9th and 10th centuries there seems to be no connexion between Italy and English glazed pottery. I do not understand the argument that a Byzantine potter (or someone trained in his art) is more likely to have stayed in S. France than gone direct to NW. Europe; in the 1st half of the 9th century S. France was of little interest while NW. Europe was Charlemagne's imperial epicentre and in direct touch with emperors and caliphs. Islamic pottery in S. France (see above, p. 119) is no evidence to the contrary as long as Spain was largely part of Islam (see above, p. 101).

Stage-I glazed ware at Constantinople was ancestral to the early 9th-century (Stage-II) developments that are the prototypes for Stamford ware and have not so far been found anywhere else except at Athens and Corinth. Stage I is more primitive and not unlike the significant glazed sherd found in the make-up of the mosaic period of the Great Palace.²⁴⁴ This make-up is now thought to belong to 450-550 rather than to the early 5th century, which narrows the gap to two centuries between this make-up (and the glazed sherd it contained) and the late 8th-century (?) Stage-I glazed ware. Simple lead-glazed ware of the same Hellenistic origin persisted in Egypt too, though it is not firmly dated. It is, however, no more likely that Byzantine glaze originated from it than from some ware made nearer the capital, for Egyptian glazed ware did not develop technically at all until the 9th century.²⁴⁵ Canary-yellow glaze and petal decoration, characteristic of the early 9th to 10th centuries at Constantinople and at Stamford, seem to be entirely absent from Islamic pottery of any period, and the mottled green and ferrous green are rare in the latter, unless recent discoveries modify the information given me by the late Arthur Lane. Although

²⁴² R. B. K. Stevenson has kindly supplied the following comments stating his present views in the light of recent discoveries.

²⁴³ Stevenson (1954).

²⁴⁴ Stevenson (1947), especially p. 32.

²⁴⁵ Stevenson (1954), pp. 92-3.

clear yellow glaze is a result of the clay over which it lies, glaze like that from Stamford and Constantinople is not found at any other period or place. White clay was used, of course, often enough, but no Roman, Islamic or later English medieval wares can be confused with them at their best. It must therefore be technique rather than clay alone: clay is chosen to suit technique.

At Constantinople the strokes of red under-glaze slip paint showing reddish or brown ('Bovril') through the yellow glaze (see above, p. 103) were characteristic of 10th- and 11th-century pottery (Stage IV). Their partial resemblance to the red painting on Pingsdorf ware is probably coincidence, as they can best be interpreted as a degeneration of the coloured applied petals, blobs and slip coating of Stages II and III.²⁴⁶

PAINTED POTTERY

by D. B. WHITEHOUSE

However one approaches the problem of the origin of painted pottery in western Europe, the wares of the Mediterranean basin cannot be ignored. For this reason, I include a note on some of the painted pottery found in the eastern Mediterranean. Although in this area work proceeds at a growing pace, the gaps in our knowledge of medieval wares are still immense and no comprehensive account is possible. Attention here is drawn to two discoveries: Byzantine painted pottery from Corinth, and Mameluk pottery from Ātlit in the Levant.

CORINTH

Corinth is one of our richest sources of information on Byzantine pottery. Among the unglazed material are two types of painted pottery: *i*, 'matt-painted' ware, which was in use from the late 11th century until the 13th century; *ii*, a 'protogeometric' variety of matt-painted pottery, which belongs exclusively to the 12th century.²⁴⁷ The first type comprises jugs, jars and amphorae with a buff or red fabric and decoration in red, brown, black or (rarely) white. Most vessels have monochrome ornament, although a few are painted in both red and black, and consists of hastily executed loops, spirals and stripes. The protogeometric variant is entirely different. Instead of simple cursive motifs the pottery is decorated with a zone of hatched or cross-hatched triangles, each with a pendant group of concentric semicircles. Most examples are jugs with decoration in purple slip confined to the shoulder. T. S. MacKay dates the type to the early and middle years of the 12th century.

We do not know yet whether matt-painted pottery was related to the narrow-line wares of Apulia, in which loops, spirals and stripes also occur (see above, p. 138), or whether its distribution was confined to southern Greece. However, the appearance in the 10th century of painted amphorae and bowls in the Dobrudja region

²⁴⁶ Stevenson (1947), pp. 43-4.

²⁴⁷ Theodora Stillwell MacKay, 'More Byzantine and Frankish pottery from Corinth', *Hesperia*, xxxvi (1967), 249-320, especially 279-88.

of Romania²⁴⁸, where glazed wares of Byzantine derivation were introduced at an early date, suggests that painted pottery may yet be found in Turkey or N. Greece.

ĀTLĪT

Although known to occur, early Islamic painted pottery has received little attention in the Levant.²⁴⁹ However, in the Mameluk period painted wares were widely used and, although few examples have been published, one convenient source of information exists: C. Johns's account of the pottery from Ātlit.²⁵⁰ The painted sherds from Ātlit belong to thickly potted jugs and platters with a buff or red fabric. They are decorated in red, purple or blackish slip. The ornament is usually geometric, with zones of cross-hatched lozenges and triangles, sometimes accompanied by spirals and loops. The sherds were found in deposits which are later than the destruction of the site by the Mamelukes, in either 1264 or 1291.

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BIBLIOGRAPHY

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|-----------------------------------|--|
| Ament (1964) | H. Ament, 'Rotbemalte fränkische Keramik aus dem Mittelrheingebiet' <i>Bonner Jahrb.</i> , CLXIV (1964), 321-6. |
| Böhner (1950) | K. Böhner, 'Die Keramik von Breberen und Doveren', <i>Bonner Jahrb.</i> , CL (1950), 212-19. |
| ——— (1955-6) | K. Böhner, 'Frühmittelalterliche Töpferöfen in Walberberg und Pingsdorf', <i>Bonner Jahrb.</i> , CLV-CLVI (1955-6), 372-87. |
| Borremans and Lassance (1956) | R. Borremans and W. Lassance, 'Recherches archéologiques sur la céramique d'Andenne au moyen âge', <i>Archaeologica Belgica</i> , XXIIb (1956). |
| Borremans and Warginaire (1966) | R. Borremans and R. Warginaire, <i>La Céramique d'Andenne, Recherches de 1955-1965</i> (Rotterdam, 1966). |
| Braat (1960) | W. C. Braat, 'Die frühmittelalterliche Keramik von Burgh', <i>O.M.R.O.</i> , XLI (1960), 95-106. |
| Bruijn (1960-1) | A. Bruijn, 'Die mittelalterliche keramische Industrie in Schinveld', <i>Ber. R.O.B.</i> , x-xi (1960-1), 462-507. |
| ——— (1962-3) | A. Bruijn, 'Die mittelalterliche keramische Industrie in Südl limburg', <i>Ber. R.O.B.</i> , XII-XIII (1962-3), 356-459. |
| ——— (1965) | A. Bruijn, 'De middeleeuwse potterbakkerijen in Zuid-Limburg', <i>Publ. van het Provinciaal Gallo-Romeins Museum te Tongeren</i> , IX (1965). |
| Coquet (1960 and 1963) | J. Coquet, 'Les Carrelages vernissés du VIIe siècle à l'abbaye de Ligugé', <i>Rev. Mabillon</i> , I (1960), 109-44, and LIII (1963), 80-90. |
| Dhondt and Van de Walle (1949-50) | J. Dhondt and A. L. J. Van de Walle, 'La Trouvaille de monnaies carolingiennes de Zelzate', <i>Handelingen der Maatschappij voor Geschiedenis en Oudheidkunde te Gent</i> , n.s. IV (1949-50), 3-21. |
| Dunning (1949) | G. C. Dunning, 'Dating medieval pottery, part II', <i>Archaeol. News Letter</i> , I, no. 12 (April 1949), 1-2. |
| ——— (1956) | G. C. Dunning, 'Trade relations between England and the continent in the late Saxon period' in D. B. Harden (ed.), <i>Dark-Age Britain: Studies presented to E. T. Leeds</i> (London, 1956), pp. 218-33. |
| ——— (1959) | G. C. Dunning, 'Pottery of the late Anglo-Saxon period in England' in G. C. Dunning <i>et al.</i> , 'Anglo-Saxon pottery: a symposium', <i>Med. Archaeol.</i> , III (1959), 31-77. |

²⁴⁸ Maria Comşa, 'La Civilisation Balkano-Danubienne (IX^e-XI^e siècles) dans le territoire de la R. P. Roumaine', *Dacia*, n.s. VII (1963), 413-38.

²⁴⁹ Note, however, the material published by D. C. Baramki, 'The pottery from Khirbet el Mefjar', *Quarterly Dept. Antiq. Palestine*, X (1944), 65-110.

²⁵⁰ C. N. Johns, 'Excavations at Pilgrims' Castle, Ātlit (1932-3): Stables at the south-west of the suburb', *ibid.*, V (1936), 31-60, especially 54-5.

- (1968) G. C. Dunning, 'The trade in medieval pottery around the North Sea' in J. G. N. Renaud (ed.), *Rotterdam Papers* (Rotterdam, 1968), 35-58.
- García Guinea *et al.* (undated) M. A. García Guinea, J. González Echegaray and B. Madariaga de la Campa, 'El Castellar, Villajimena (Palencia), Campaña 1963', *Excavaciones Arqueol. en España*, xxii (Palencia, undated), 1-36.
- (1966) M. A. García Guinea, J. González Echegaray and J. A. San Miguel Ruiz, 'Excavaciones en Monte Cildá: Olleros de Pisuerga (Palencia), Campañas de 1963-65', *Excavaciones Arqueol. en España*, lxi (Palencia, 1966), 1-68.
- García y Bellido *et al.* (1959) A. García y Bellido, A. Fernández de Avilés, L. Monteagudo and P. Vigil, 'Excavaciones en Ivliobriga y exploraciones en Cantabria (Campañas de 1953 and 1956)', *Archivo Español de Arqueol.*, xxix (1956), 131-99.
- González Salas (1945) S. González Salas, 'El castro de Yecla, en Santo Domingo de Silos (Burgos)', *Informes y Memorias*, vii (Madrid, 1945).
- Grosso (1958) G. Grosso, 'La Ceramica altomedioevale e medioevale nei recentiscavi di Albingaunum', *Rivista Inguana e Intemelina*, n.s. xiii (1958), 20-6.
- Hinz (1965) H. Hinz, 'Die karolingische Keramik in Mitteleuropa' in W. Braunsfels (ed.), *Karl der Grosse, Lebenswerk und Nachleben*, iii (Düsseldorf, 1965), 262-87.
- Hübener (1953) W. Hübener, 'Keramik und Kämmen in Dorestad', *Germania*, xxxi (1953), 177-89.
- (1959) W. Hübener, *Die Keramik von Haithabu* (Neumünster, 1959).
- Hübener and Lobbedey (1964) W. Hübener and U. Lobbedey, 'Zur Struktur der Keramik in der späteren Merowingerzeit', *Bonner Jahrb.*, clxiv (1964), 89-129.
- Hurst (1957) J. G. Hurst, 'Saxo-Norman pottery in East Anglia: part III, Stamford ware', *Proc. Camb. Antiq. Soc.*, li (1957), 37-65.
- Hussong (1936) L. Hussong, 'Frühmittelalterliche Keramik aus dem Trierer Bezirk', *Trierer Zeitschrift*, xi (1936), 75-89.
- (1944) L. Hussong, 'Herstellungsorte und Datierung der karolingischen Keramik im Rheinland' in *Das Ahnenerbe, Bericht über die Kieler Tagung 1939* (Neumünster, 1944).
- Llubiá Munné (1967) L. M. Llubiá Munné, *Cerámica Medieval Española* (Barcelona, 1967).
- Lobbedey (1964) U. Lobbedey, 'Glasierte Keramik des frühen Mittelalters am Oberrhein', *Bonner Jahrb.*, clxiv (1964), 130-2.
- (1968) U. Lobbedey, *Untersuchungen mittelalterlicher Keramik vornehmlich aus Südwest-deutschland* (Berlin, 1968).
- Lung (1955) W. Lung, 'Töpferöfen der frühmittelalterlichen Badorfware aus Badorf und Pingsdorf', *Kölnener Jahrb.*, i (1955), 55-66.
- Mazzucato (1968) O. Mazzucato, 'Ceramica medioevale romana: la produzione attorno al Mille', *Palatino*, 4 ser., xii (1968), 147-55.
- Stamm (1962) O. Stamm, *Spättrömische und frühmittelalterliche Keramik der Altstadt Frankfurt-am-Main* (Schriften des Frankfurter Museums für Vor- und Frühgeschichte, 1, 1962).
- Stevenson (1947) R. B. K. Stevenson, 'The pottery' in *The Great Palace of the Byzantine Emperors* (Walker Trust), i (1947), 31-101.
- (1954) R. B. K. Stevenson, 'Medieval lead-glazed pottery: links between east and west', *Cahiers archéol.*, vii (1954), 89-94.
- Van de Walle (1945) A. L. J. Van de Walle, 'Historisch en archeologisch onderzoek van het portus Eename', *Handelingen der Maatschappij voor Geschiedenis en Oudheidkunde te Gent*, n.s., ii (1945), 37-51.
- Whitehouse (1965) D. B. Whitehouse, 'Forum Ware: a distinctive type of early medieval glazed pottery in the Roman Campagna', *Med. Archaeol.*, ix (1965), 55-63.
- (1966) D. B. Whitehouse, 'Medieval painted pottery in south and central Italy', *Med. Archaeol.*, x (1966), 30-44.
- (1968) D. B. Whitehouse, 'The medieval glazed pottery of Lazio', *Papers of the British School at Rome*, xxxv (1968), 40-86.

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