## THE INTRODUCTION OF TIN-GLAZED CERAMICS IN NORTH-WESTERN EUROPE: NEW DATA FROM THE BRITISH MUSEUM NEUTRON ACTIVATION ANALYSIS PROGRAMME

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RIASSUNTO: La ricerca chimica per stabilire la provenienza delle prime maioliche prodotte nell'Europa nordoccidentale ha identificato inaspettatamente come di origine toscana più della metà dei campioni analizzati provenienti da siti inglesi di consumo. Inaspettatamente perché la decorazione è tipica delle regioni a nord ed a est degli Appennini e perché le forme dei vasi e di alcuni dei boccali sono quasi sconosciute nell'Italia settentrionale e centrosettentrionale, benché qualche vaso con anse ad anello – tipico dei primi prodotti dei Paesi Bassi – comincia ad essere notato. Il decoro predominante del trigramma bernardiniano suggerisce che questa merce di esportazione potrebbe essere stata venduta ai seguaci del culto del nome di Gesù. Dato il livello sociale ed economico dei ceramisti italiani emigrati ad Anversa, è improbabile che fossero sponsorizzati – il modello prevalente per spiegare il trasferimento di tecnologie – ed è possibile che non abbiano nemmeno prodotto le maioliche largamente diffuse in Inghilterra.

A focus of recent work in the North-West Mediterranean has been on the introduction of glazed tableware about AD 1200 in South France and Northern Italy, with notable discoveries at Marseilles and Savona (Marchesi 1997; Berti 1997: 392-395). The assumption made is that significant changes in technology can only be made by immigrant craftsmen (Mannoni 1995-1996). This was indeed the case three hundred years later when Renaissance maiolica making was introduced north of the Alps by named Italian potters (Dumortier 1987). Problems remain, however, in identifying their products; and the analogy, as we shall see, may not be appropriate.

The British Museum has undertaken three linked projects to identify the sources of tin-glazed pottery found in North-West Europe by neutron activation analysis. The method involves calculating in each irradiated sample the concentrations of 23 chemical elements. The statistical analysis of the results from a number of samples of known or presumed origin provides a type of chemical "fingerprint" of the clays employed at a particular manufacturing centre. It has been shown for the places studied in these projects that there is greater variation between centres than within them, reflecting geological differences. We assume that the clay for these wares was obtained locally. Allowances can be made for modifications during manufacture - such as adding temper or mixing imported whitefiring clays - and deposition (Hughes 1999: 58-59). The source of items found on consumer sites of uncertain origin is determined by matching their analyses with that of the "known" samples.

The first project on Spanish pottery – for the most part published (Hughes 1986; 1991a; Gaimster 1991; Blake 1992; Hughes 1995a) – has confirmed distinctions between

known south and east Spanish centres (Seville, Malaga, Granada, Valencia and Barcelona) and resolved some particular problems, including the identification of pottery found at Pula in Sardinia as Valencian and arista tiles from Castel Sant'Angelo in Rome as Sevillan. Subgroups within centres have also been differentiated; but so far the Valencian ones appear to be temporal rather than spatial. The second on Italian pottery is complete, but published only preliminarily (Hughes 1989; 1991b; 1995b; 1997), and established that the local material provided showed differences not only between regions but also between centres within them, as well as confirming Castelli istoriato. Notable outcomes from the examination of British finds include the identification of some archaic maiolicalike closed fragments as Italian, in particular from Tuscany, 17th-century narrow bodied costrels with lion's head handles as Pisan, and later oil jars as from the Arno valley. The third, which has provided the new information on which we will concentrate in this paper, was designed to distinguish between the first Low Country and English products of the 16th century, and was the subject of a British Museum colloquium published earlier this year (Gaimster 1999a).

Three Italian potters were working in Antwerp before 1513, one of whom, Guido Andries, was certainly there by 1508. Piccolpasso attributed to Guido di Savino of Casteldurante – the same man – the bringing of the art to Antwerp. Janne Marie de Capua repatriated. Jan Francisco de Bresse may have worked for Guido; and his nephew married Guido's widow (Dumortier 1987). Guido's sons emigrated: two to Norwich in 1567. One of them was in Colchester four years later where he was joined by another brother in 1573. The first production in London



Fig. 1. Engelbert of Nassau's Book of Hours, c. 1477-1490, Bodleian Library, Ms. Douce 219, fols 145v-146r. The vase containing the peacock feather on the upper left shelf on the left-hand page and the similar shaped one in the lower left niche on the right-hand page are Italian. The ring-handled vase, albarello and bowls are Spanish.

seems, however, to be associated with a partner Jacob Jansen (Britton 1987: 18-23; Edwards 1974: 7-8, 27 n. 30; 31, 77-78).

Three quarters of a century ago Bernard Rackham identified the first South Netherlandish pots as those decorated in Italian style but made in forms unknown in Italy, which he thought – in part erroneously as the ringhandled vase is Spanish – were depicted in Engelbert of Nassau's *Book of Hours*, now datable to between 1477 and 1490, and in later Flemish paintings (Rackham 1926: 29-33, 95-103; Alexander 1970: 22, pl. 79-80; Fig. 1; Blake 1999: n. 191; Fig. 2. M. Spallanzani drew our attention to this painting). Jugs, including one represented in Memling's Virgin and Child Enthroned in Berlin of the same decade, were assumed to be Faentine (Rackham 1926: 103 n. 1; Fig. 3). It has also been difficult to distinguish the first English products from imports from the Low Countries.

The reference sherds for the chemical analysis were mainly biscuit ware from four Low Country centres and from Norwich and London (Fig. 4). They not only show a distinction between the products of the two sides of what was then called the "Middle Sea", but also between the towns and even between different workshops, although

the analyses of some continental finds are anomalous (Hughes 1999: 57, 59-63; Fig. 5). Interestingly an archaic maiolica-type vase from Ghent in a deep red local-type fabric matches Antwerp (ex inf. B. Hillewaert; Hughes 1999: 62, no. 123 - wrongly recorded as a jug from Antwerp on p. 71, and from Utrecht on p. 77). It is presumably a rare by-product of tin-glaze tilers who worked in the North Sea coast lands in the 14th century (Norton 1984: 145-155). If so, it implies that at least one tiler came from Southern France or North-Central Italy, where tin-glazed closed forms were lead glazed within, rather than from Spain where they were not. One of the notable ringhandled vases showing characteristic Italian decoration of a bird on a reserved contoured ground (Hughes 1999: no. 65; Hurst 1999a: fig. 4.1.3), a micro-jug (or mug?) (Hughes 1999: no. 14), relief-moulded stove tiles from a Cistercian abbey (Gaimster 1999d), and floor tiles from the Tower (Gaimster 1999c) and Whitehall Palace (Hurst 1999b), all tin-glazed and found in London, have been identified as made in Antwerp, as have a later 16thcentury decorated (Hughes 1999: no. 66; Hurst 1999a: fig. 4.3.7) and many mottled "Malling" jugs (Hughes 1999: 61-62), both in a stoneware shape and, in the case of the lat-





Fig. 2. Annunciation, assigned to the early 16th century and attributed to a Flemish painter, Museo Nazionale di Villa Guinigi, Lucca, inv. no. 132 (Ragghianti 1990: no. 51. We owe this reference to B.W. Meijer). Detail.

Fig. 3. Hans Memling, Virgin and Child Enthroned, c. 1480-1490, Berlin, Gemäldegalerie, inv. no. 529. Detail.

ter, imitating polished stone. Some early Low Country pots have been assigned to Amsterdam, including two London micro-mugs (Hughes 1999: nos. 59-60; Hurst 1999a: fig. 4.3.3-4); but nearly all the others were it seems made in Antwerp, including at least two with the characteristic ring handles of the vases (Hughes 1999: nos. 4, 8; a fuller and more accurate record of the analyses will be published, Hughes, in press). Presumably the round-mouthed jugs, sometimes with a "collared" rim or neck, were also made on the continental side of the North Sea (Blake 1999: n. 159; Hurst 1999a: fig. 4.4.23).

However, sixteen of the thirty English samples from consumer sites were chemically quite distinct and, when compared – at John Hurst's suggestion – with the database from the British Museum's Italian project, were best matched with Tuscan reference material, in particular with that from Siena and the lower and mid-Arno valley (Hughes 1999: 66 - Southampton jug omitted; Fig. 6). This is strange because there are no close parallels for either

the decoration or the forms in Tuscany (Blake 1999: 25-27). Similar large ovoid (Fig. 7) and small globular jugs with "resting" handle bases (Fig. 8) and decorated in Ballardini's floreale gotica style are known in Emilia Romagna and the north Marches, particularly at Faenza and Pesaro, which the interpretation of the chemical analyses exclude; but nothing like the ring-handled (Fig. 9) or rare resting handle-based vase (Fig. 7), the tall-necked jug (Fig. 10) or the two vase forms (Fig. 1, 11-12) are known from North-Central Italy. However, a ring-handled vase was auctioned in Florence (Fig. 13, left) and another has been found in Siracusa in Sicily (Sicilia 1999: 151, 163, 340-1 we owe this reference to M. Spallanzani; Fig. 13, centre). The tin glaze covering a third found in the Venetian lagoon may overlie a slip (ex inf. F. Saccardo; Fig. 13, right). This characteristic combined with its discovery at the head of the Adriatic suggests that the form may also have been made on this side of the Appennines, which fits Guido Andries' origin and Venetian connections (Dumortier

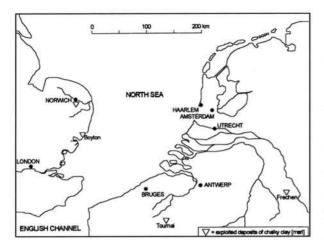


Fig. 4. Map showing location of production sites analysed by the British Museum for the South Netherlands maiolica and early English delftware project (from Hughes 1999: fig. 3.1).

1987: 164-165). Had indeed he practised his craft at Venice he may have learnt there to import and perhaps mix clays, a practice necessary at Antwerp and continued as a tradition at Norwich where marls were presumably as easily available to his son as they had been to Guido in his home town in the Marches (Lightbown 1980: 13-14; Hughes 1999: 58-60; Britton 1987: 12-14; Caiger-Smith 1973: 109, 200).

Clearly the unusual forms were made for export to the north-west European market, as the two vases bearing the English royal coat of arms, one of which was found at the Tower of London, testify (Gaimster 1999b; Fig. 11-12). One of a pair of unusual loop-handled lattimo glass flasks appears to bear Henry VII's - the first English Tudor king badge and head, similar in profile to those on coins of 1504-1509 (Clarke 1974: 52; Fig. 14). The form is unknown in Italy and is presumably an example of Venetian glass made to order. This and the other atypical forms were probably imitating Spanish lustre ware which, as Engelbert's Book of Hours shows, were prized by the Burgundian nobility (Fig. 1). Henry VIII's inventory drawn up in 1542 listed both tin-glazed ceramic and similarly painted white glass wares (Blake 1999: n. 209). As the interpretation of the chemical analyses suggests five groups from at least two different geographical areas, this ware was not a one-off, for example, diplomatic gift, but probably in continuous demand. This hypothesis is bolstered by the excavation from the same context at a manor house in the English countryside of a ring-handled vase and a jug from two different clay batches (Fig. 8-9), to one of which the armorial vases belong (Fig. 11-12).

Features which distinguish the English finds from their Italian analogues are the predominance of the Bernardine trigram on the smaller forms, and the absence of open forms. The cult of the Holy Name spread in late

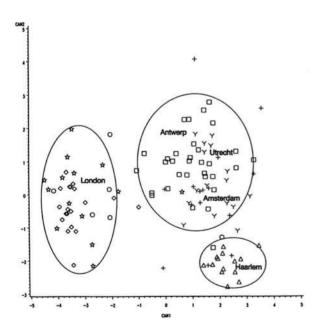


Fig. 5. Plot of the first two discriminant analysis scores arising from neutron activation analysis of maiolica from London and the Low Countries. Ceramics from known production centres which are included are: London, Aldgate (diamond symbol), 16th-century albarelli (star), and Netherlandishstyle (circle); Amsterdam (plus); Antwerp (square); Haarlem (triangle); and Utrecht (Y) (from Hughes 1999: fig. 3.4).

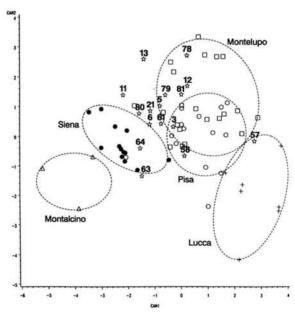


Fig. 6. Plot of the first two discriminant analysis scores arising from neutron activation analysis of reference groups of pottery from Tuscany: Lucca (cross symbol); Montalcino (triangle); Montelupo (square); Pisa (empty circle); and Siena (filled circle). Numbered stars are London finds with a similar clay composition (from Hughes 1999: fig. 3.11).



Fig. 7. Large ovoid jug (polychrome decoration, height 257 mm) flanked by resting handle-based vases (left blue, right polychrome decoration, height 138 mm), excavated in 1955 at Gateway House, Cannon Street, London EC4, Museum of London inv. nos. 23044-6 (from Noël Hume 1977: pl. 3).

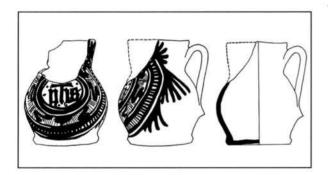


Fig. 8. Small globular jug (blue decoration, height 124 mm), excavated in 1969 at The Old Manor, Askett, Bucks., Buckinghamshire County Museum inv. no. AYBCM 1971.43.1 (from Hurst 1970: fig. 19).

15th-century England, which was the first country to establish its feast in 1488-89 (Blake 1999: n. 200). The ring-handled vase form may have been favoured by the lay fraternities as drinking mugs in their celebrations *de nomine Jhesu*. So the popularity of this pottery may be due to devotion, with Italian producers substituting Spanish suppliers, rather than merely to the desire to acquire an exotic commodity. In elite eyes pottery and glass could hardly compete with the appeal of gold plate and textiles such as carpets and cloth.

However, the emigration of Italian potters to Antwerp may have had little to do with making table ware. They joined the artists', not the potters', guild (one even became its only potter dean in 1564-65 - and note that this is the guild which every major Flemish artist joined who wished to sell on the Antwerp market, at this time the principal emporium of Europe). They made floor tiles and wall panels for prestigious clients, despatched pottery to Paris, and acquired property in Antwerp. Janne Marie de Capua returned to Italy to serve the Duke of Milan (Dumortier 1987). In England Jasper Andries and Jacob Jansen claimed they made Galley pavinge tyles and Vessels for potycaries and other undefined types (Edwards 1974: 77). These were thus men of substance and standing rather like the Italian glass masters who made façon de Venise in Antwerp in the second half of the 16th century (De Raedt 1997: 361); and similar to Jacomo da Pesaro, the magistro bocalario, who prospered in Venice - where a magister pictor majolicarum belonged to the ars pictorum rather than the arte dei bocaleri - between 1507 and 1546, who signed maiolica towards the end of his life and to whom Guido Andries may have entrusted a money transfer (Alverà Bortolotto 1988: 14-19, 44-47; Dumortier 1987: 164). It is unlikely that these emigrant potters to north-west Europe were dependent on mercantile sponsorship or on making the 450 vessels which have so far been found on 115 sites in England datable to between



Fig. 9. Ring-handled vase (blue and orange decoration, height 153 mm), excavated in 1969 at The Old Manor, Askett, Bucks., Buckinghamshire County Museum inv. no. AYBCM 1971.42.1 (from Hurst 1970: fig. 18).

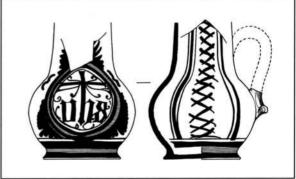


Fig. 10. Tall-necked jug (blue decoration, height > 143 mm) found in 1865 in All Hallows the Less burial ground, Upper Thames Street, London, Cuming Museum, Southwark (Rackham 1926: 99, cp. pl. 24a).





Fig. 11-12. Armorial vases from the City of London (blue decoration, restored height 180 mm) and excavated in 1938 at the Tower of London (polychrome decoration, restored height 185 mm), Victoria and Albert Museum inv. no. C298.1938 and Tower (Gaimster 1999b).



Fig. 13. Left: Ring-handled vase (blue decoration, height 100 cm) auctioned by Semenzato in Florence (Semenzato 1988). Centre: Ring-handled vase (blue decoration, height 148 mm) excavated in the Santa Lucia suburb of Siracusa, Sicily, Museo di Palazzo Bellomo inv. no. 48053 (Sicilia 1999: no. 62). Right: Ring-handled vase (blue decoration, height >87 mm) from Bacino San Marco, Venice, Galleria Giorgio Franchetti, Ca' d'Oro, Venice, inv. no. C12683 (ex inf. F. Saccardo).

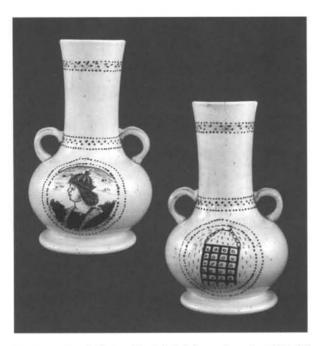


Fig. 14. Loop-handled lattimo glass flask (polychrome decoration, height 198 mm), British Museum inv. no. MLA 1979, 4-1, 1 (Tait 1979: 120-122).

about 1475 and the 1530s (Hurst 1999a: 95). Although a number of ring-handled vases found in London have been assigned on chemical grounds to Antwerp, it may be significant that the only biscuit one comes from Bergen op Zoom, the major pottery centre on the Scheldt (Vermunt 1999; Baart 1999: 127, fig. 7.24), which was not included in the British Museum analysis programme.

The point I wish to make in conclusion is that, although there are detailed written records of migrating potters and some of the earliest products can now be provenanced chemically, more work needs to be done before we can relate what some now call Italo-Netherlandish (rather than South Netherlands, Gutiérrez 1999a; 1999b; Hurst 1999a: 98) maiolica pots to these artists. However, the *incunabulum* of English maiolica – or delftware as it was later called – dated 1600 can at last be chemically associated with London and thus perhaps with Jacob Jansen's workshop at the Sign of the Rose in Aldgate, London (Hughes 1999: 64-65; Britton 1987: 105; Tait 1992; Noël Hume 1977: 113-114). Its circular inscription reads: THE•ROSE•IS•RED•THE•LEAVES•ARE•GRENE•GOD •SAVE•ELIZABETH•OUR•QUEENE•.

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