Catherine’s interest in samian ware is well-known (see the list of her published works), as is her sense of fun, so this little contribution may amuse her, and pose questions, which will hopefully lead to lively debate. My relationship with Don has been less close, by nature of our differing interests, but his work on Roman lamps contains a direct artistic relationship to that on decorated samian ware. A number of the motifs in those with discus scenes are very close to ones found on South Gaulish ware, which suggests a common inspiration, or copying from one to another.

The organisation of the kiln-loads at La Graufesenque reveals that the potters used a decimal system of counting, although one or two instances of vessel size employed the duodecimal system. The majority of the so-called graffiti are badly broken, and incomplete. Nevertheless, there are many complete lines, which describe the name of the individual who is presumed to have entered the pots to the kiln, the shape of the vessel put in, its size and quantity. Thirty-six lines do not have a decimalised quantity, and of these all but a few are not counted in fives (Table 1). This suggests that the base unit was indeed five – after all the easiest non-mechanical counting unit, using the digits of the hand.

However, two of the lines (nos 1 and 27) concerned contain some thousands of vessels, and numerous others have hundreds. To count to five is easy, to separate piles of vessels into fives or tens is equally simple; however, to keep track of these quantities thereafter is more difficult, and it is likely that there were personnel available, perhaps the scribes themselves, who could use the Roman calculator - the abacus.

Some years ago I worked with the samian ware from Exeter. Much was published (Dannell 1991), but sherds of little stratigraphic or intrinsic interest were not. The rubbings remained in my files. However, recently they emerged from their hiding place to be scanned for a project aimed at recording all decorated samian forms which have an ovolo extant. What I said when I saw the enlarged scan on the screen of the sherd under discussion is not printable; it was certainly a surprise!

What remains of the figure (Fig. 1, a) is not clear, but it looks similar to Jupiter, Hermet 122B (Hermet 1934; see also Oswald 1937, O. 8). It is not the same poinçon, because the angle of the bent left arm differs (Fig. 1, b). The face, although difficult to discern, seems to be that of a thick-set male with blunt features. Some hair is just visible on the back of the head. Drapery can be seen from the waist down. Unfortunately the upper torso is heavily smudged.

The details on the Exeter Drag. 37 are flattened; and it looks as though the mould was worn at the time that the bowl was cast, so other examples of the basic bowl should exist. Below a double-bordered ovolo, which ends in a trident tip tucked under the egg towards the left, is a male figure apparently holding a frame of some sort. Set into a cartouche towards the bottom is some writing, in Gaulish (?) lettering.

The ovolo (Fig. 2, a) was used in moulds associated with the names of a number of potters. There may have...
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Table 1 — Vessels not counted in decimal values on the graffiti from La Graufesenque.

Fig. 1 — a...Exeter QS 365; b...Hermet 1934, pl. 69.7.

Fig. 2 — a...Clear example of the ovolo type from a Drag. 30 (La Graufesenque, unmarked); b...Memor ovolo; c...Secundinus i ovolo; d...Tetlio ovolo; e...Primus iv ovolo; f...Mo(mmo)? ovolo.
been more than one version, or just one that became
degraded with time. It appears with the signatures of
Memor5 (Fig. 2, b), Secundinus i 6 (Fig. 2, c), and Tetlo7
(Fig. 2, d) from La Graufesenque, and Primus iv8 (Fig. 2,
e) of the Lot Valley group. A mould-stamp of Mo[mmo]9
(Fig. 2, f) of La Graufesenque is also known to be asso-
ciated with it.

A sizeable rectangular frame has been superimposed
over the figure’s right arm, which can still be seen under-
neath. This is in the form of a ‘cartoon’ addition to the de-
moulded vessel, scribed while the clay remained soft, and
before the slip was applied. The frame is clearly of wood,
with the short sides extending over the upright, which
carries the tenon to the joint. The uprights are carefully
depicted, carved with lineal mouldings. The frame is
supported by the figure’s left hand, the fingers being
clerly shown. The object concerned can be seen through,
it is not solid. It is unlikely to be a lyre, those are carefully
depicted on other poinçons. First, it is the wrong shape,
and Oswald shows clearly that the correct shape was
known at La Graufesenque10. Other frames like those for
windows, or for making bricks or tiles are possible, but
the decoration on the uprights suggests that this object
was crafted, rather than one of solely utilitarian value.

However, it is what is on the frame, or board, which is
intriguing. Just below the elbow of the right arm is a patch
of what appears to be roughness, but on magnified inspec-
tion, is a small, depressed series of letters (Fig. 3, a-c).
This means that they were also inscribed onto the bowl
after it was demoulded, otherwise, they would have been
written into the mould, and would appear raised in retro-
grade on the bowl. There are probably five or six charac-
ters beginning with something that looks like a B and
ending with a fairly clear U. The third letter may be a D.
All of these letter forms are shown by Marichal11.

So what appears to be represented is a man carrying a
frame-like object, with a tag, which may identify either
the object or more likely the name of the person. Given
the fact that these scribing are freehand additions, it
might reasonably be presumed that they form a vernacular
joke or comment. There is one object which would fit the
situation - that of an abacus being used to record batches
of pots as they were entered to the kiln. It seems that small
receipts inscribed on clay were issued for each batch12.

The Roman hand-abacus is well known (Fig. 4). It is
rectangular, having its long side at the top, unlike the
shape shown on the current example. However, it seems
intrinsically unlikely that the hand version would have
been used amidst the dust and dirt surrounding a kiln. It
would have been more suitable for the market-place, for

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5 See Atkinson 1914, Pl XIV.74 (there wrongly read as Sasmomos) on Drag. 37.
6 La Graufesenque (Depôt de Fouilles, G 65-72), mould), on Drag. 37.
7 La Graufesenque (Depôt de Fouilles, 88 V66 2), on Drag. 37.
8 Camelon 1975, (1E & Site A HM X 5/10 /103) on Drag. 37: my thanks to Brenda Dickinson for this rubbing.
9 Die n° 11a, Museum of London (formerly London Museum) L 6205), on Drag. 37; again thanks to Brenda Dickinson; compare with Knorr 1919,
Taf. 59A.
10 For example, O. 73-87.
11 Marichal 1988, 21-46. R. Tomlin (pers. comm. for which many thanks) commented, ‘I can see the ß and the δ, but that the form of the latter is the
way we envisage it today, rather than how it would have been written in the 1st century. It is tempting to think of a BODVO- name, but no, I don’t
really have any ideas’. However, see Marichal 1988, 28 n°7 for a comparable delta letter type.
12 Babelon & Blanchet 1895, 645, n° 1925; there is another good example in the collections of the Museo Nazionale in Rome.
13 See the delightful relief from the Musée du Louvre in Bonner 1977, fig. 13.
commercial transactions, or the school house. Early versions of the abacus (literally ‘a table’, probably a sand table, but later inscribed on marble), are known in Greek contexts, and these, unlike the hand abacus, have the short side at the top.

The methodology for using the abacus is carefully explained by Mabel Lay (1957). She questions whether it was used principally for multiplication, or rather for simple addition. Her discussion of the quinary-decimal abacus (1957, 281) is clearly relevant to the quantification at La Graufesenque.

The exactitude with which the potters recorded their firings seems to indicate that this record-keeping was an essential part of the commercial activity associated with the kiln. Since the quantification is given together with the size and type of vessel fired, it is a reasonable conclusion that the sums relate to either the filling of the kiln, or commercial orders, or both.

Increasing knowledge of the vocabulary used repetitiously in graffiti from different kiln sites, suggests that for samian at least, there was one known both in the potteries and by those who ordered. Perhaps this reflects the original influence of the army in stating its requirements.

**Bibliography**


Oswald, F. 1937. *Index of ﬁgure-types on terra sigillata* (Liverpool).


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13 See Daremberg & Saglio 1877, Tome 1 A-B, 1-3, fig. 3.
14 Ibid.
15 Lay 1957 deals principally with Greek ﬂat-table and pebble types, but she points out that the modern oriental abacus is short-topped (277) and notes particularly the calculation shown on a Greek abacus (278) where the room for addition would seem to favour a short-topped model.
17 See Wild 2003, 42-3 for descriptive terms used for military requisitions of textiles in Egypt. The army, from wherever it bought, and however many intermediaries were involved, would have wanted to know exactly what it was getting.