# Distinguishing Between Rouletting and Chattering on Ancient Mediterranean Pottery

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Although the various techniques used in ceramic production are obvious to those who work with clay professionally, they are not always recognized by archaeologists. A surface decoration commonly found on Greek and Roman fine wares, including Attic and Campanian Black Gloss, Thin-Walled Ware, Eastern Sigillata, Italian Sigillata, African Red Slip Ware, and Vesuvian Sigillata, is usually called rouletting, but I argue that in most cases the pattern is achieved by another technique known as chattering. Although some archaeologists are aware of the difference between the two procedures, there is ongoing confusion in the identification and use of these terms. This note discusses both decorative methods in an attempt to identify the diagnostic features that may help archaeologists differentiate between the two.*

## INTRODUCTION

The technique of chattering has a long history, and yet only a very few archaeologists have identified this method of decoration.[1] Sparkes and Talcott indicate that this technique is present on black-slipped Greek pottery from the second decade of the fourth century B.C.E.,[2] although Kenrick suggests it was used as early as the fifth century B.C.E.[3] Chattering was certainly well used by Roman potters, especially on wares that were produced on a large scale, such as Italian Sigillata and African Red Slip Ware, and the technique is found on African Red Slip Ware dating as late as the seventh century C.E. Indeed, chattering is still used by potters today. To assist archaeologists in the identification of rouletting and chattering, this note examines the techniques from a potter's perspective: I describe in detail the resulting patterns generated by both methods and the tools and processes used to create them. I also investigate the incidence of such decoration on Campanian Black Gloss, Italian Sigillata, and Vesuvian Sigillata[4] from pre-79 C.E. contexts at Pompeii and look at examples of these decorative techniques on Greek and Roman pottery housed in the Museum of Ancient Cultures at Macquarie University in Sydney, Australia.

The first decoration discussed in this note, commonly called rouletting, is found on the floors of Greek and Roman open forms as well as on the

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* All figures are my own.

[1] See, e.g., Sparkes and Talcott 1970, 30; Begley 1986, 48; 1988, 435; Cook 1997, 203–4.

[2] Sparkes and Talcott 1970, 30.

[3] Kenrick 1990, 148.

[4] McKenzie-Clark 2012. Vesuvian Sigillata is a class of sigillata that is composed of two fabrics. The first relates to a type of pottery called Produzione A (Soricelli 1987, 74), Tripolitanian Sigillata/Campanian Orange Sigillata (Kenrick 1985, 283–302; 1996, 43), or Imitation Sigillata (Hayes 1976, 75); the second is pottery made from a similar fabric that has not been documented previously.

external upper walls and rims of Roman vessels. It is characterized by one or more concentric bands of patterning that consist of a series of multiple fine lines. These lines generally run at right angles across the pattern, and the depth of the decoration varies from a deep indentation to a slight feather-like disruption of the surface. On Greek vessels this decoration commonly covers the surface in an unbounded band, while on Roman pottery such decoration is usually associated with grooves on either side of the pattern.

Roulette decoration is achieved with a tool called a roulette, which consists of a patterned wheel that turns on an axle.[5] When pressed into contact with a rotating vessel, the patterned edge of the wheel revolves, leaving a continuous band of decoration in the clay. The roulette wheel displaces rather than removes the clay. To avoid overriding or smudging the design, the potter usually removes the tool from the surface when the vessel has turned through 360°. This timing requires skill and experience. Modern roulette tools vary widely in construction and are made from a variety of materials, including fired clay, metal, and plastic. Some have handles while others are rolled across the clay by hand. It is likely that tools of similar design were used in antiquity and were constructed of comparable materials—with the exception, of course, of plastic.

Roulette decoration is regular and uniform; the design takes up the full width of the band, and the pattern does not overlap. The pattern typically found on Roman vessels indicates that they were made with roulettes with raised, rounded edges and a pattern of regularly spaced ribs running at right angles across the roulette head. The shallow U-shaped grooves on either side of the band are made by the edge of the tool. The uniform execution of the patterns suggests that they were made by roulettes with handles, which allow the potter to control and maintain constant pressure on the clay surface. The time at which this decoration is applied is critical: if the clay is too wet, it will adhere to the wheel and the resulting pattern will be blurred and unclear; if the clay is too dry, the design will not be transferred. Consequently, rouletting is usually applied to soft leather-hard clay so that the imprint of the design registers clearly on the surface. Therefore, the newly thrown vessel would have been removed from the wheel head to dry slightly; once the clay was in a soft leather-hard state, it could be recentered on the wheel for decoration.

To facilitate an efficient work flow, potters may have thrown large open vessels on a bat, a stiff disk of material attached to the wheel head. Once complete, the form and bat would be removed from the wheel together, thus preventing warping and distortion of the vessel. The bat and vessel could then be easily recentered for decoration. Although some clays can be trimmed at this stage, it is more usual to allow the vessel to dry until it is leather hard; it is then inverted, recentered, and trimmed to form the foot. Rouletting is not generally suitable for use on vessel walls. Considerable pressure is needed to ensure the pattern is imprinted in the clay, and the walls of even soft leather-hard vessels will easily be distorted if such pressure is applied. In contrast, vessel floors are not distorted; they are supported by the wheel head below. As a result, rouletting is best suited for embellishing the floors of open vessels, such as plates and platters. In addition, the extent of pattern coverage using the rouletting technique is limited by the width of the roulette tool and the straight profile of the tool's decorated face: rouletting is therefore not used to decorate large areas of curved surfaces.

Chattering, in contrast, is achieved with a completely different tool made from supple, springy metal. The tool edge is held at an angle against the vessel surface and is allowed to shudder over the clay as the vessel rotates. By moving the tool across the surface as the form revolves, the potter can decorate large areas rapidly. Differences in texture can be achieved by altering the speed of the wheel and the pressure applied to the tool against the vessel surface. Holding the tool at varying distances from the cutting edge or changing the angle at which it touches the surface will also alter the appearance of the decoration. Similarly, the finished look of the decoration is affected by the fineness of the clay. More delicate, detailed patterns are possible with fine-bodied clay than with coarse fabrics.

The technique of chattering is identified by a series of clearly defined, shallow, triangular-shaped incisions with characteristic straight edges terminating in narrowed extremities, which are caused by the metal tool digging into the clay surface at an angle. The decoration is built up over many rotations of the wheel, and the resulting pattern clearly shows the overlapping rows of decoration created with each turn of the vessel (fig. 1). Chattering is often found within inscribed lines, especially on Roman Italian Sigillata plates. These lines are characterized by sharp V-shaped incisions that are made with a cutting tool at the time of decoration. Invariably, the chattered decoration goes beyond the grooves and does not fill the space between the grooves uniformly (fig. 2).

The amount of moisture in the clay also affects the pattern and dictates whether the tool merely displaces or removes surface clay. On soft leather-hard clay, the
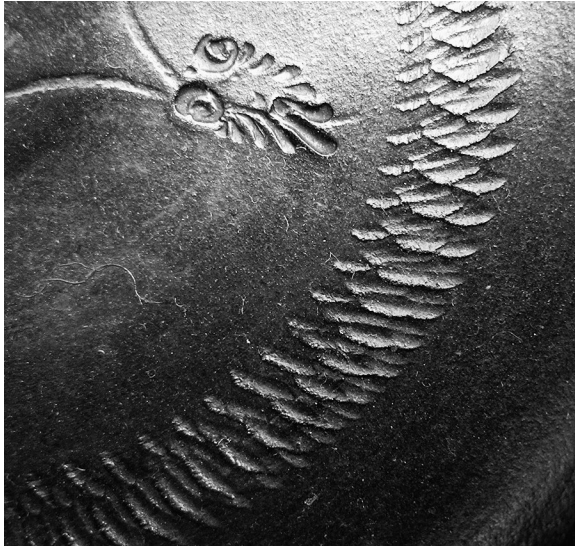
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[5] Rice 1987, 145.

FIG. 1. Chattered decoration on an Attic kotyle (Sydney, Museum of Ancient Cultures, Macquarie University, inv. no. MU 1037). The overlapping lines of triangular-shaped patterning are caused by the continued rotation of the vessel during decoration.



FIG. 2. Chattered decoration on an Italian Sigillata plate (Sydney, Museum of Ancient Cultures, Macquarie University, inv. no. MU 3805). The decoration extends beyond the line of the inner incised groove and is not distributed evenly within the band of decoration.

tool will dig heavily into the surface, chipping wedges of clay from the vessel and producing a deep textured pattern. This method is sometimes confused with the "cut-glass" technique, which is created with a U- or V-shaped tool.[6] For example, Peacock describes and illustrates a vessel decorated using the "cut-glass" technique.[7] The large area, shape, and even distribution of the pattern indicate that this vessel is more likely to have been decorated by chattering when the clay was in a soft leather-hard state. In such instances, vessels were purposely thrown with thick walls. The vessels were then allowed to dry only slightly to a soft leather-hard state before being recentered on the wheel for decoration. The depth of the resulting chattered pattern is a direct result of the softness of the clay, which allows the chattering tool to dig more deeply into surface, thereby removing divots of clay from the surface and reducing the thickness of the vessel wall. On stiff leather-hard clay, the tool merely skims the surface, leaving indentations that resemble a very shallow feather-like pattern.

Chattering can be used to decorate the floors of open vessels, such as dishes, plates, and platters (fig. 3), as well as rims and external walls of cups, dishes, and bowls. This technique exerts relatively little pressure on the clay surface; consequently, chattering can be used to decorate walls of vessels without the risk of



FIG. 3. Chattered decoration on the curved floor of an African Red Slip Ware plate (Sydney, Museum of Ancient Cultures, Macquarie University, inv. no. MU 4510). The decoration is asymmetrically placed because the vessel was not centered accurately on the wheel head prior to decoration.

distortion or collapse. Therefore, chattering has many advantages over rouletting: it is easier and quicker to execute; it requires less skill on the part of the potter;

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[6] Johns 1971, 13.

[7] Peacock 1982, 57, pl. 19.

and the extent of pattern coverage, even on convex surfaces, is unlimited.

Whereas modern potters can use chattering on wet clay because electric wheels rotate at very high speeds, ancient potters would have needed to leave thrown vessels to dry before applying this decoration. Clay dries at different rates according to atmospheric temperature, humidity, and exposure to drafts, and the variation in the chattered decoration one sees in ancient vessels may have been either intentional or purely accidental. In some cases, the vessel may have dried rapidly to a stiff leather-hard state, and when it was decorated the dryness of the clay would have produced the fine feather-like texture evident on some pieces of Italian Sigillata. Ancient potters may have intentionally replicated this random pattern by manipulating the time of decoration.

Modern potters use a variety of tools for chattering. Two common tools are a thin, rectangular piece of flexible metal and a long, narrow strip of metal that is curved at one end and has a straight handle at the other. The rectangular tool is simply held at an angle against the clay surface. The handled tool, in contrast, is grasped firmly in two hands, and the curved end with sharpened edge is placed at an angle against a rotating leather-hard vessel, which is fixed securely to the wheel head. The handle of the tool is held parallel to the revolving surface rather than at right angles, and the curved cutting edge is moved across the surface of the vessel, creating the characteristic pattern. If held at the correct angle, the metal tool will hit the clay surface and begin to vibrate. The pressure applied by the potter and the length and flexibility of the tool set up a rhythmic movement that makes the cutting edge dig into the clay as the tool shudders across the surface. It is highly likely that ancient potters also used flexible metal tools to create this pattern. A strigil (fig. 4, top), for example, could easily have been used as a chattering tool; made from thin, flexible metal, it closely mimics modern chattering tools (see fig. 4, bottom) in terms of size and flexibility. A strigil that was perhaps no longer used for its original purpose would require little modification to make it suitable for this new use.

Although rouletting and chattering are produced by very different methods, the finished decorations are sometimes deceptively similar in appearance. It is usually necessary to view such decoration under a magnifying lens or microscope to differentiate the two methods. Key elements identify each technique. Roulette decoration consists of parallel lines of uniform thickness, while chattered decoration consists of wedge-shaped incisions or indentations in the clay. Rouletting produces a regular pattern of consistent width that runs the full circumference of the vessel without overlapping. Chattered decoration does not align at the inner and outer edges of the decorated band and does not cover the area uniformly; this is because the pattern is created in more than one pass over the surface, leaving a series of overlapping rows. Roulette decoration is achieved with a patterned wheel that on Roman pottery usually leaves characteristic shallow grooves on either side of the decoration. The study of pottery from Pompeii indicates that where grooves are present in combination with chattered decoration, they were inscribed before the decoration was added. On ancient pottery, these inscribed grooves may have acted as guides for the placement of the decoration or may have been used to imitate roulette decoration. Close examination of these grooves can often help distinguish between the two techniques. Shallow, rounded grooves usually indicate rouletting, whereas V-shaped, angular grooves suggest chattering. Similarly, if the decoration is bounded by grooves and the pattern extends beyond the lines, the decoration was created by chattering.

Begley has suggested that Greek pottery more often displays chattering, while Roman wares were usually decorated by rouletting.[8] The evidence from Pompeii suggests, however, that this was not the case. Roulette and chattered decorations are found on both pre-Roman and Roman slipped tableware in assemblages from various pre-79 C.E. contexts at Pompeii. Both techniques have been identified on Campanian Black Gloss, Italian Sigillata, and Vesuvian Sigillata. Examination of all examples indicates that both decorative techniques were applied when the clay of the vessels was in a leather-hard or stiff leather-hard state. Rouletting and chattering were not identified on any other class of slipped tableware within the contexts studied. Analysis of the 414 diagnostic vessels of Campanian Black Gloss found in the House of the Surgeon (Regio VI.1.10) reveals that Campanian Black Gloss potters used chattering almost exclusively: chattering is found on 13 vessels, whereas rouletting is found on only one.

Examination of Italian and Vesuvian Sigillata diagnostic vessels from Regiones VI.1, VI.5, and I.9 shows a similar pattern.[9] Only two examples of rouletting

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[8] Begley 1986, 48.
[9] Regio VI.1: House of the Vestals (VI.1.7), House of the Surgeon (VI.1.10), Bar of Acisculus (VI.1.17), and Bar of Phoebus (VI.1.18). Regio VI.5: House of the Wild Boar (VI.5.10),

House of the Flowers (VI.5.9–19), and House of the Etruscan Column (VI.5.17–18). Regio I.9: House of Amarantus (I.9, 12.2), Bar of Amarantus (I.9, 11.5).

FIG. 4. A copper strigil (Sydney, Museum of Ancient Cultures, Macquarie University, inv. no. MU 3740) (*top*) and a modern-day chattering tool made from a strip of industrial metal from a packing crate (*bottom*). The flexibility and strength of a strigil would make it an ideal tool for applying chattered decoration.

were found on 580 Italian Sigillata vessels, whereas chattering was identified on 71 diagnostic sherds. Correspondingly, only three examples of roulette decoration were found on 505 Vesuvian Sigillata sherds, while chattering was identified on 17 vessels (table 1). Rouletting is found only on the floors of plates or platters on these three classes of pottery, whereas chattering is found on the floors of Campanian Black Gloss, Italian Sigillata, and Vesuvian Sigillata as well as on external surfaces of Italian Sigillata. This technique is not found externally on Campanian Black Gloss or Vesuvian Sigillata vessels. The results of this study show that Italian Sigillata workshops made greater use of both these decorative techniques than did Vesuvian Sigillata and Campanian Black Gloss manufacturing centers. It is also apparent that potters who produced Vesuvian Sigillata employed rouletting more frequently than did potters who made Campanian Black Gloss and Italian Sigillata.

While it has been suggested that this type of decoration was used to prevent vessels sticking to one another when stacked in the kiln during firing,[10] the slip used to coat black-gloss and sigillata pottery contains no glass-forming components. In ordinary circumstances, therefore, slipped vessels can touch without the risk of adhering to one another. It is only when the kiln is overfired that slipped vessels will fuse together.[11] The decorative techniques of rouletting and chattering may have served a functional purpose related to the mass production of these wares. The manufacture of a limited number of vessel types of uniform dimensions enables potters to manufacture large numbers of vessels efficiently while at the same time allowing workshops to estimate clay quantities accurately and to use storage space economically. In addition, the manufacture of standardized vessels ensures that kilns are stacked efficiently and to maximum capacity, reducing the likelihood of wasted space within the kiln chamber, which is costly in terms of fuel consumption. The resulting pottery will also be easier to transport to market because open forms can be stacked one inside the other. When pottery is stacked in this way, there is a risk that the foot of one vessel will rub and abrade the floor surface of the vessel below. The resulting abrasion would be very noticeable on vessels with glossy surfaces.

Analysis of Italian Sigillata and Campanian Black Gloss open vessel forms at Pompeii reveals that bands of rouletting and chattering are commonly in line with the foot. The use of decoration on the floors of

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[10] Kenrick 1990, 148.

[11] Martin 1997.

TABLE 1. Incidence of roulette and chattered decoration found on Campanian Black Gloss, Italian Sigillata, and Vesuvian Sigillata from pre-79 C.E. contexts at Pompeii (Regiones VI.1, VI.5, and I.9).

| | Campanian Black Gloss | Italian Sigillata | Vesuvian Sigillata |
|---|---|---|---|
| All sherds | | | |
| Total no. of diagnostic | 414 | 580 | 505 |
| Total no. of decorated | 14 | 73 | 20 |
| % decorated | 3.4 | 12.6 | 4.0 |
| Sherds with rouletting | | | |
| No. | 1 | 2 | 3 |
| % of total diagnostic | 0.2 | 0.3 | 0.6 |
| % of total decorated | 7.1 | 2.7 | 15.0 |
| Sherds with chattering | | | |
| No. | 13 | 71 | 17 |
| % of total diagnostic | 3.1 | 12.2 | 3.4 |
| % of total decorated | 92.9 | 97.3 | 85.0 |

*Note:* Numbers are based on rim and base diagnostic sherds.

mass-produced open vessels therefore may have been an attempt to disguise signs of abrasion in these areas, to break up the surface so that any imperfections introduced during transport would be less noticeable. Correspondingly, chattered decoration is often found on jutting rims and external walls of Roman vessels. This decoration may have served the same purpose—to disguise minor damage.

Surface imperfections caused by the manufacturing process are also apparent in the Pompeian pottery, especially Italian Sigillata and Vesuvian Sigillata. Rough surface areas are caused when inclusions in the clay are brought to the surface during the throwing process, and small craters and scarring commonly occur during the trimming process, when inclusions in the clay are dragged across the leather-hard surface. Normally, defects such as these would be corrected by consolidating and smoothing the clay after the vessel is trimmed. In the case of mass-produced vessels, however, this is time-consuming and often impractical. Furthermore, although the vessels are coated in slip, the slip will not always mask these blemishes.

While chattered and rouletted decoration were used to great effect to enhance the aesthetic appearance of slipped tableware, it is also likely that these techniques were employed for practical reasons: to disguise wear in areas exposed to high levels of abrasion, to hide surface flaws, and to camouflage manufacturing mishaps. Nevertheless, both techniques enabled pottery to be decorated easily and quickly, a major factor when producing a financially viable product.

In conclusion, it is apparent that ceramic workshops in pre-Roman and Roman times made use of both rouletted and chattered decoration. Analysis of Campanian Black Gloss, Italian Sigillata, and Vesuvian Sigillata assemblages from Pompeii indicates that the use of chattering was more common than rouletting in each class of pottery.

There are several possible reasons for this phenomenon. Potters may have preferred chattering because it could be used on the external walls of vessels, whereas rouletting was restricted to floor surfaces. Chattering also offered potters more flexibility in terms of the timing of the application of decoration: unlike rouletting, which was best applied when the clay was in a soft leather-hard state, chattering could be applied to vessels whose clay had a wide range of moisture content—an advantage in a busy ceramic workshop. In addition, chattering also gave potters a greater range of decorative effects than rouletting.

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