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Evaluation of ceramics
Professional artisanship as a tool for archaeological interpretation

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This paper aims to explore how professional artisanship can contribute to archaeological interpretations through the examination of ceramic artefacts based on the experience of a trained producer of ceramics. Certain forms of practical artisanal knowledge and practical levels of skill are defined within the area of theoretical knowledge known as tacit knowledge. The purpose of this proposal is to investigate whether professional artisanal skill can contribute to archaeological interpretation, and if so, how. The method that was used during this investigation is known as artisanal interpretation.The paper includes artisanal analyses conducted by the author on five ceramic artefacts from a closed find dated to the Roman Iron Age (200–300 AD) in the parish of Sjogersta in the municipality of Skövde, Västergötland, Sweden. The need to broaden our current archaeological interpretation methods is discussed. The work presented here makes it clear that there are aspects of archaeological ceramic artefacts that can only be appreciated by a trained professional ceramist. Finally, the paper discusses how an artisanal perspective can contribute to cooperation between professional artisans and archaeologists which, if extended further, could lead to more detailed and complex views of the past and its society, economy and crafts.

Keywords: ceramics, Roman Iron Age, tacit knowledge, artisanal interpretation, interdisciplinary, crafts

Introduction

The study of archaeology makes great use of cross-disciplinary cooperation so as to achieve the best possible interpretations of archaeological finds. When it comes to interpreting artefacts, archaeology has an important tradition of analysis, interpretation of form and function and typology. Archaeologists often work together with physical scientists to establish a body of measurable data, and the physical sciences contribute a great deal in areas such as dating, age, sex, attritional wear, materials analysis and the analysis of macrofossils. Additionally, the art sciences and the science of aesthetics hold knowledge that is vital for archaeology, and there is cooperation between these fields from time to time. One aspect that is seldom looked at, however, is cooperation between archaeologists and professional artisans. What, in the first place, is a professional artisan? While many people work in the crafting industry, there are some with a higher knowledge of their craft – people who are considered to be more skilled than their colleagues – artisans who have spent 10–20 years of their lives learning and perfecting a specific trade, and those who may have studied their trade at a university level. It is rare, however, for archaeologists to consult these skilled craftsmen, which is a pity because such people may be able to examine an archaeological find and provide information about it that simply would not occur to an archaeologist. My own background involves an extensive knowledge of the theory of ceramics and a professional proficiency in that craft, combined with a knowledge of archaeology. I have developed my skills in the field of

craft ceramics and have been able to convey some of my knowledge to others in a variety of ways, mainly as a teacher of fine arts. To have the opportunity to demonstrate how another artisan, specifically a prehistoric colleague, may have reasoned and worked, is an extremely enticing prospect.

The purpose of this article is to demonstrate what professional artisanal skill can contribute to archaeological interpretation. The hypothesis may be stated as follows: A person with professional artisanal skill can supplement the known information about archaeological finds. The questions are: What can a professional ceramics artisan see in ceramic archaeological materials that an archaeologist may not notice? Can artisanal interpretation be developed into a reliable method? How does artisanal interpretation differ from the current modes of archaeological interpretation?

Method and limitations

This work includes a review of the relevant literature, an empirical examination of a limited selection of archaeological materials and a report on the conducting of one interview. The finds to be examined were suggested by three experienced archaeologists, a course that was adopted in order to avoid any prejudices surrounding the ceramic materials. I did not wish to be influenced by previous interpretations, and so it was important to examine the items with only my own background in ceramics as an aid to interpretation. I wanted to be introduced to these artefacts, as it were, without having seen them before. In practice the material investigated is limited to a number of artefacts from a closed find dated to the Roman Iron Age (Axelsson 2005:5ff). The literature concerning the find consisted of the excavation report (Axelsson 2005) and a book, Archaeological Encounters Along Route 26 Borgunda-Skövde (Ask & Berglund 2005). Consequently, I did not read the archaeological interpretation until after I had developed my own interpretation of the artefacts. The materials were subjected to an empirical examination in order to develop an artisanal interpretation that covered only the craft of ceramics and the question of the evaluation of practical knowledge. I was the only professional artisan to examine the materials.

Background and previous research

In my own background, artisanal knowledge and art have been extremely important. I received my degree (Master of Fine Arts 200p) from Göteborg University in 1997 in low-technology firing techniques after a total of eight years of schooling in ceramics and art. During my graduate work, I searched the archaeological institutions in the Nordic countries for an archaeological ceramist, someone who had at least a bachelor's degree in ceramics, but despite many attempts, I was unable to find any relevant material regarding artisanal interpretation and how it could contribute to the archaeological interpretation of ceramic materials.

After working for five years as an artist and ceramics teacher, I began to study archaeology in 2002, and while taking the basic archaeology courses I discovered several interesting questions regarding archaeological ceramics that I wanted to find answers to. I received my Master's degree in Archaeology in 2009, and later the same year I was introduced to the work of Sandy Budden, a skilled ceramist and archeaologist who recently published the first extensive articles about the skill of ancient potters (Budden 2008). Budden concentrates on exploring how the ancient potters may have passed on their skills to the next generation and, working together with the archaeologist Joanna Soafer, explores the social role that pottery may have had in prehistoric society. Budden has also worked out a method for observing what she describes as *technological signatures* in ceramic artefacts that can be used to interpret the degree of skill and technique in a quantitative direction (Budden 2008:4).

At the same time I had written my bachelor's and master's theses on a similar subject (Botwid 2009a, 2009b), the evaluation of skills in archeaological ceramic material.

The foremost object of interest in my archaeological inquiries has been to investigate the ceramic artefacts amongst archaeological finds individually through an in-depth evaluation of the skill of the ancient producers of ceramics. The prevalent idea has been that if one can understand nuances in the skills represented in ceramic material within a given archeaological context, new possibilities for interpretation may arise that have previously been concealed (Botwid 2009b:44f). The possibilities for tracing a skilled individual or a specialist group are of great interest. I have used my own practical knowledge to perform artisanal analyses that have uncovered new information to broaden existing interpretations.

In his paper *Från Lincolnshire till Östdanmark* (From Lincolnshire to East Denmark) the archaeologist Stefan Larsson (2000) reaches some interesting conclusions. A potter from Lincolnshire was traceable in archaeological material from Lund because of certain special sherds that differed from the more

common ones in that material. This potter, who is thought to have moved to Lund in the early 12th century, was following an "internal structural pattern of behaviour" that led the individual to take his or her knowledge to another area (Larsson 2000:82). Larsson's investigation demonstrates that it is possible to recognize an individual potter's products (Larsson 2000: 74, 80–81). He concludes that the synoptic classification of (medieval) ceramics deprives archaeological interpretations of their detail and sharpness, making existing finds into a mass of material regarded as having little value in relation to the overall interpretations (Larsson 2000:70).

The theoretical focus of this approach is that of "knowledge in action" or "tacit knowledge" (Molander 1996, 2002:33–56, Gustavsson 2002:88–90 and Pye 1978:4–8), i.e. we aim to investigate how to define practical knowledge, which is important in order to evaluate such knowledge and utilise it for interpreting archaeological material. By highlighting the practical and theoretical aspects of artisanal knowledge I hope to stimulate discussions over a possible method for qualitative artisanal interpretations of skill.

The technical terms used in the article are those prevalent in the field of ceramics and will be explained further in appendix 1.

Theoretical background and definitions of concepts

Western scientific discourse has often held the theoretical side of knowledge in high regard. This knowledge is referred to as *declarative knowledge* (Gustavsson 2002:88–90). The practical side of things, what people accomplish by doing, has not been valued as highly (Molander 1996:35). We gain knowledge through seeing, imitating, practicing, failing and retrying. This is true in both theoretical and practical matters. Theoretical scientific knowledge has existed for a long time and has been well defined. When it comes to practical knowledge, however, there is a distinct lack of verbal terminology to describe the non-verbal know-how that is involved.

Existing theories on levels of practical knowledge

I will attempt to describe practical knowledge here from a theoretical and philosophical point of view, based on Bengt Molander's dialogically focused work presented in *Kunskap i handling* (Molander 1996) and David Pye's writings on knowledge theory from a practical standpoint. Pye delves further into the subject in *The Nature of Art and Workmanship* (1978). In his book, *Vad är kunskap? En diskussion om praktisk och teoretisk kunskap*, Bernt Gustavsson (2002) has attempted to explain how to define practical knowledge and give tacit knowledge a higher status.

These authors' descriptions of practical knowledge are similar, each proposing that there is knowledge that is larger than merely preconceived ideas about "practical work", that it requires both a great deal of practical learning and an intellectual processing of that learned knowledge, even if the intellectual side of things is not verbalised.

The pattern in the theoretical framework presented here is to divide practical knowledge into two parts. Each of the explanations presented can be seen as implying similar divisions of the same matter. It is therefore important that the differences are visible and their obviousness is clear. The lower and higher levels of practical knowledge as set out in the following are based on the author's theories. Let us first define the concepts required with regard to the levels of practical knowledge.

Lower level of practical knowledge

Know-how – knowledge which enables practitioners to know the steps and possess an instrumental knowledge. They know what to do and they do it routinely without thinking; artisans have a specific goal or predefined idea of how something will be. This kind of knowledge is based on tradition and a sense of security (Molander 1996:171).

Workmanship of certainty – knowledge that builds on greater margins of safety; it shows good technical knowledge and knowledge of the craft, but not to the level reached in Workmanship of risk. This type of knowledge can be converted to large-scale production, since it keeps within the well-defined limits of the task (Pye 1978:4–8).

Proficiency – when practitioner base their work on learned knowledge, work as they are accustomed to doing, and keep within their area of safety (Gustavsson 2002:88–90). This level is also described by Sandy Budden as *procedural knowledge* (Budden 2008:1) and by Debbie Olausson as *automatic actions* (Olausson 2008:39).

Higher level of practical knowledge

Knowledge of orientation (Orienteringskunskap) – requires a great deal of experience, a comprehensive view of the subject, and a specific set of skills for the craft. Practitioners have no problem working with anything within their area of expertise and are able to

answer new questions perfectly well using a combination of tacit knowledge and a higher level of practical ability (Molander 1996:170).

Workmanship of risk – the most admired artisanal skill, which is inimitable and based on a need to go beyond what is deemed safe; a common occurrence in the crafting world (Pye 1978:4–8).

Knowledge of confidence – practitioners whose actions stem from a vast knowledge of the subject and who have a comprehensive view which allows them to know what and why practical work can be performed in one way or another. Such practitioners can assess things as whole entities (Gustavsson 2002:88–90).

My definitions

The concept I call *professional artisanal skill* is defined via the idea of a *higher level of practical knowledge* described above. Such an artisan is admired by his or her own colleagues and is likely to take greater risks in developing new techniques. The concepts *artisanal knowledge* and *good artisanal knowledge* may be regarded together as making up the *lower level of practical knowledge*, a level that needs to be divided in two so that the evaluation will be more exact. The term *lower level of practical knowledge* described by the authors above is likely to be too broad for the present purpose, as there is a considerable difference between an experienced artisan who has been practising for a long time and an artisan who is still a beginner or is only able to work according to strictly laid-out steps and with poor results, who would, in the scheme proposed here, be assigned to the *artisanal knowledge* level. In my experience, the knowledge possessed by most artisans is *traditional knowledge*, which is built upon knowing what one has learned and refining one's proficiency on that basis. These artisans would in the present scheme reach the level of *good artisanal knowledge*. Consequently, such artisans would not be very likely to take risks that would endanger their production.

For the purposes of this paper we will therefore use the terms *artisanal knowledge* and *good artisanal knowledge* only to refer to the lower level of practical knowledge, separated into two parts so that *artisanal knowledge* describes the lowest level, which includes beginners and poor artisans, and *good artisanal knowledge* describes the traditional knowledge, which covers skilled artisans who are transmitting the tradition that belongs to their trade. The term *professional artisanal skill* will be used only when referring to the higher level of practical knowledge and the most skilled artisans, people who are likely to develop the trade and carry it forward.

An example of artisans' non-verbal know-how

Crafting people often discuss their craft together. No matter what the trade may be, professional artisans understand its inner core, have the ability to perform and develop it, and can discuss it in depth with others. My own feelings, for example, when working in the flow of reflection-action-understanding which occurs when crafting, can be described as something I call being *in the moment*. When I am *in that moment*, nothing can go wrong; the connection between the brain and the hands is so close that the borders are erased. My comprehension of the hands' intelligence and their knowledge-in-action stems from my experience of this *moment.*

Verbalisation of *tacit knowledge* is necessary in order to make it explicit. I have spoken with other artisans and asked them to describe their feelings in words. Here is one example I received from a flintknapper with many years of experience; in attempting to describe her feelings, Maria said:

> "It's hard to explain, but you know when it happens. It's that point where you stop trying to do a thing; the stone just moves of its own accord and you simply move along with it. It's a great feeling. Torbjørn (Pedersen, Maria's teacher) sees when it's happening, and then we don't need any words, just a nod will do. He and I both know that I'm there." (Maria Rosén, pers. comm. July 2006)

I would claim that this experience together with natural ability and long training in the trade are vital for reach the level of professional artisanal skill.

Results and experiences from testing a new method

After having conducted a craft-based analysis of archaeological ceramics from the Roman Iron Age, I have worked out a practical method that might be called *artisanal interpretation*. This is an empirical method in which my experience in ceramics can help me to discover and evaluate the artisanal skills of ancient ceramists. Practically speaking, the method consists of studying the artefact in a variety of ways. First, it is necessary to create an overall understanding by making a visual inspection, and then a more thorough tactile examination in which all the parts of the artefact are explored by touch. It is then time to reflect and note down things that seem relevant, before making a simple pencil sketch of the vessel. It is at this point that the evaluation framework developed above comes into play, i.e. one can assess whether the vessel was made by

Figure 1. The parish of Sjogersta, municipality of Skövde, Sweden. Excavation site. After Västergötlands Museum 2005. Illustration by Henning Cedmar Brandstedt.

a ceramist who had professional artisanal skill, good artisanal knowledge, or artisanal knowledge. One way of evaluating the artefact in this sense is to compare the performance of one's ancient colleague with one's own knowledge as an artisan. It should become evident to the investigator how skilled the artisan was. The technical markers can be very many things, such as wall thickness, the clay mix or the totality of the action performed. Some of these values are measurable and some simply come from experiences of concrete artisanal training and tradition according to the ceramic skill, with the evaluating artisan as the instrument. The non-verbal qualities, especially those at very high levels of skill, are harder to explain in a strictly technical or scientific way, and it is my intention in further work to try to develop a qualitative method for examining evidence of skill in archaeological ceramic materials. This method could very well lean on former methods, such as the method presented by Sandy Budden concerning technological signatures for the examination of skill (Budden 2008:4). Budden's work is highly interesting and valuable, especially in the context of quantitative investigations, and I will try to contribute to it further by considering the anomalies and technical leaps that easily become lost or hidden in large-scale quantitative investigations.

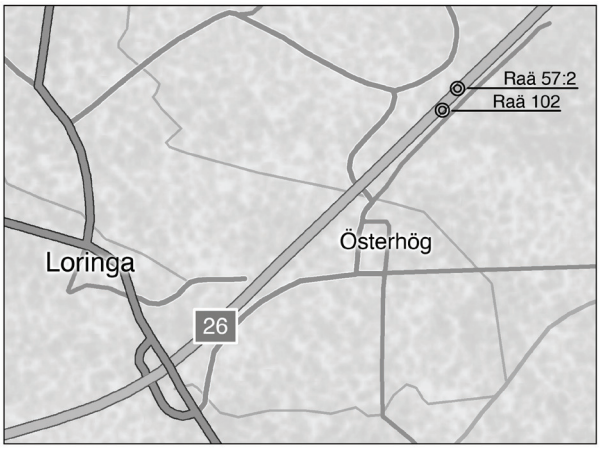

Figure 2. The excavation site at Sjogersta. Illustration by Henning Cedmar Brandstedt.

Having performed my examination of the finds referred to me employing the approach outlined above, I was able to demonstrate the levels of artisanal skill represented in the material. Four out of the five vessels (finds 4, 5, 6, and 11) were probably created by persons with *good artisanal knowledge*, and one vessel (find 16) was probably made by someone with *professional artisanal skill*. Further investigations may confirm whether find 16 perhaps originated from some other geographical area, as this evaluation might imply.

Presentation of the material

The finds from Österhög in the parish of Sjogersta, municipality of Skövde

The Västergötland Museum conducted excavations at a burial site in 2003 in connection with an extension of the road system in the municipality of Skövde in the county of Västergötland (Fig. 1). The graves, dating back to the Roman Iron Age, contained several ceramic vessels as well as bronze fragments and iron arrowheads. Among the numerous items recorded during the excavation of the two visible stone circles were a shallowly placed funerary urn, many signs of activity, some hearths, some traces of meals, and even a few post holes. Despite the visible signs of activity, no traces of actual settlement were found in direct connection with the burial site. The closest excavated settlements, dating to the pre-Roman or Roman Iron Age, are located 600 m south of the burial site, at the homestead of Österhög. During the Roman Iron Age, these graves would have been within sight of the settlement area. The main purpose of the original investigation was to determine the spatial orientation of the burial site with regard to the nearby ancient historical remains (Axelsson 2005:5–8).

The items examined

The ceramics found in these stone circles included in the present investigation were: Raä 102, A 200; Raä 57:2, A 250 (Fig. 2). Also included was a funerary urn, which was not previously indicated, A 1118. The distance between the stone circles was approximately 80 m and the urn was placed between them, about 25 m from Raä 102 (Fig 3).

Five ceramic vessels were found and given the numbers 4, 5, 6, 11 and 16. Also included in the investigation was a sample of metal, numbered 12. This was included on account of the quality of its craftsmanship and the fact that it was found together with find 16, the funerary urn, making it highly significant (Axelsson 2005:13–14).

All the ceramic items from this closed find were examined with regard to the craftsmanship of the ancient ceramists who shaped them.

Location of the items within the excavation

The stone circles were round, between 7 and 10 m in circumference and 1–1.5 m high. Both contained earth and stones as well as an inner burial chamber of stone. No bone fragments were recorded, but a dark coloration in the bottom of both stone coffins indicates that there had been bone at one time that had completely decomposed in the extremely damp sandy or gravelly earth. Grave-goods were found in both graves. The ceramic finds from stone circle A 200 are F numbers 4, 5 and 6, and three arrowheads, a bronze buckle and a portion of leather were also found in that grave. Stone circle A 250 contained the ceramic find F 11 and a well-preserved iron axe (Fig. 3). The funerary urn (F16) contained human remnants, of a man who probably died aged between 30–50 years. Along with the ceramic urn and the human remnants was a stripe-decorated moose-horn or deer-horn disc, which may have been some type of fitting. Also found was an unusual piece of cast bronze covered in ornamentation depicting a bearded man with two upside-down birds on either side of him. This is thought to be a belt buckle (Axelsson 2005:7ff).

Original archaeological interpretation of the ceramic Items

The following is the original description and interpretation of the ceramic items as listed in the initial report on the excavation (numbers 4, 5, 6, 11 and 16, Axelsson 2005) included in Ask & Berglund (2005). Included are statements from the chief archaeologist, Catharina Axelsson, concerning the ceramic items found.

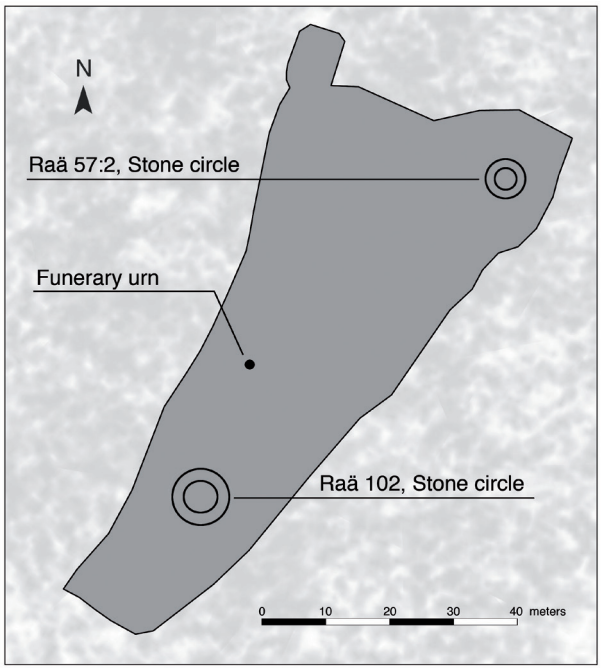

Figure 3. Internal layout of the excavation and areas examined. After Västergötlands Museum 2005. Illustration by Henning Cedmar Brandstedt.

"Two ceramic vessels were found in stone circle A 200/A824. Both were brought back to the lab for reconstruction. One could be nearly completed (F 4) and the other (F 5) consisted of the bottom and part of the body of the vessel. Both wares are blackish-brown in colour and smooth. F 4 is a thin vessel with a loop-like haft and a wide bottom and narrow neck. The mouth turns outward and the decoration consists of round depressions and angled grooves on the body and neck. The vessel is approximately 16 cm in diameter and about 18 cm high. F 5 is a small vessel, about 10 cm in diameter. This vessel too has round indentations likely made by a stick, and angled and horizontal grooves incised around the body. In stone circle A 250/A1882, we found a vessel that could be reconstructed from several sherds, F 11. This ware is also brownish-black in colour with incised horizontal grooves and angled marks around the body. The vessel is about 14 cm in diameter. All three vessels date to the Roman Iron Age period. In the funerary urn grave, A1118, there were many sherds from the mouth and body of an unadorned vessel, F 16. It is approximately 16 cm in diameter and the ware is thin, reddish-brown and smooth. Bones from the grave date to 200–300 AD, and this should be the same for the vessel."(Ask & Berglund 2005:16-18)

"At the same level, we discovered two ceramic vessels. Both were brought back to the lab and could be reconstructed. Both wares are brownish-black and smooth. The first is a larger vessel of thin ware with a loop-like haft and a wider body with a narrow neck. The mouth turns outward and the decoration consists of round depressions and angled grooves on the body and neck. The vessel is approximately 16 cm in diameter (the mouth) and about 18 cm high. The second is a smaller vessel, about 10 cm in diameter (the mouth), and was similarly adorned with round depressions, horizontal grooves, and angled marks incised around the body.

The findings consisted of a very limited area containing several ceramic sherds, charred bones, and a bronze object in the form of some type of fitting. The items were spread about in sooty, humus sand. The vessel – if it was whole at the time it was deposited – was probably not buried very deep; it seemed more to have been placed in a shallow pit. It may have functioned as a container for bones or small treasures or items.

The sherds found consisted of mouth and body sherds made of a thin, reddish-brown ware from an unadorned vessel of about 16 cm in diameter." (Ask & Berglund 2005:199-202)

Artisanal interpretation

I will first present the general features of the finds and then an example of the specific artisanal interpretation of two items to demonstrate an artisanal interpretation of an artefact and what can be evaluated in the course of an investigation (find 4 together with find 16). All the finds were included in the investigation (Botwid 2009a). The italic text of the inventory list introduces the artisanal interpretation, and interspersed with this are explanatory photographs of the vessels. The metallic item, number 12, will be examined later in the section Contextual Link to Find 12 and 1F 1118, because the object is closely connected with find 16. The typology and terminology of the vessels are based on the systems commonly used in the fields of archaeology and ceramics.

General features of finds 4, 5, 6 and 11

The decorated vessels date from the Roman Iron Age. They all display a similar degree of effort in the crafting process and style. They were fired to a relatively high heat, probably to temperatures upwards of 800–900°C, as established by the fact that the wares are hard and have no tendency to crumble; low-fired wares (600–700°C) often crumble when scraped lightly, e.g. with a fingernail. There are no signs of the vitrification that would have occurred in clay of this type (in my own experience) if the temperature had reached above 1000–1100°C. These wares are smooth, indicating that sand or very fine-grained temper was used to temper the clay, or that purified natural clay (with pebbles, straw and other visible litter picked out) was used. In the craft it is natural to go through the clay when you are using natural clay bodies before you start to produce thin ware that can withstand the firing process. My own experience of this clay is extensive since I have been using it for over 20 years. The vessels show that the artisan created them relatively quickly and was used to working with the material. The technique resembles that used by the Jydepotte women in Denmark, a craft thought to have been pursued from the Iron Age right up to 1927 (Lynggaard 1972:30). The basic form of these vessels is common in Scandinavia, but the decorative elements on them are not so common on vessels from the west of Sweden but occur mainly in Jutland and north Germany (Bergström Hyenstrand 2005:42).

The mica-rich clay is of the kind commonly found in the area and contains mica that is visible as glittering spots in the surface after firing even if the clay is used without any tempering. It has either been tempered somewhat with sand, or was gathered from one of the area's more sandy clay pits. The ceramic methods used in the creation of these vessels include a combination of pinching and coiling. The bottom was shaped on a flat surface, such as a piece of wood held in the artisan's lap, or on a table. The artisan was unable to wait until the vessel had dried completely and so it has warped slightly during its creation nor did he/she bother to correct the warp when the clay had reached a more stable state of dryness, demonstrating that the exact shape of the vessel was not really of concern. What reason the artisan might have had for acting in this way is a question for further discussion, but it may be interesting to know that this is a correction that would have taken only a few minutes when the vessel was slightly drier and the result would have been a good deal better.

It is common in traditional ceramics to fire the pots on an open bonfire or in pits that have been reduction (covered with flammable material from the start) or oxidation (open pit) fired. These particular vessels could easily be interpreted as having been pit-fired and then covered with flammable materials, in view of their black surfaces. I believe, however, that the reduction was not deep enough for this to be the likely method, even though a low temperature and short duration of firing can give this kind of surface (Anders Lindahl,

Figure 4. F 4, with a loop-like haft. Photo by Katarina Botwid.

Figure 5. F 4, with a frost-cracked (spalled) surface. Photo by Katarina Botwid.

pers. comm.). While the surface is indeed black, the blackness is only about 1 mm deep and the clay is bright yellow, which points to the vessel having undergone some other post-firing treatment which would have sealed its porous surface. One way to make ceramic ware water-resistant, black and shiny is to soot the vessel when it is still hot after firing. Sooting, along with burnishing, is an early type of technique intended to seal ware, though the black surface can also be considered decorative. I regard this technique as differing from that used with pit-fired ware, so that it would be of interest to conduct experimental firings and try different post-firing techniques to investigate which technique was common in the area. Post-firing techniques are seldom discussed in connection with archaeological ceramics. The vessels have obviously not been used in a hearth, because no reoxidation has taken place on the bottom or the lower portion of the body of the pot and there are no traces of food inside them.

My belief is that these vessels were either created specifically for funerary purposes or that newly made vessels were taken and used as burial gifts. They were created by artisans who had good artisanal knowledge.

Artisanal interpretation, find 4

Description in the find inventory: *Vessel. Clay. Thin, brown-black ware. Reconstructed. Weight 590.8 g.*

Description: The vessel is 150 mm high. The mouth, slightly thicker and turning outward, is 110 mm in diameter. The neck is 95 mm in diameter, the body is 150 mm in diameter and the bottom is 95 mm in diameter. This type of vessel can be dated to the Roman Iron Age, 200–300 BC (Lindahl et al. 2002:41).

Artisanal Technique and evaluation: The bottom was created on a flat surface, such as a table or a large piece of wood that the artisan held in his/her lap. This is evident from is full of typical scratches from the wooden surface to be seen on the outside of the bottom. This method keeps the bottom of the vessel flat while the clay is being worked from the inside outwards. In this case, the pressure used was irregular and the clay on the inside of the bottom of the vessel is uneven, which suggests a lower level of artisanal knowledge. The vessel's decoration consists of rounded depressions of size approximately 3–5 mm that might have been made with a rounded stick of wood or bone. The delicate nature of the depressions is due to the fact that the clay was somewhere between soft and leather-hard when it was decorated, the angled grooves being incised under the same conditions. The vessel was left until it had reached the bone-dry state and was then burnished, this indicates an insightful artisan, as you can't achieve a shiny surface if the clay is too damp. In this stage of production one could regard the maker as showing good artisanal skill concerning the surface of the vessel. It was then thoroughly dried, fired and treated using the techniques described above in the general artisanal interpretation. This high temperature shows that the firing and post-firing techniques can similarly be viewed as representing the level of good artisanal skill.

Figure 6. F 16. Photo by Katarina Botwid.

Figure 7. F 16, the curve of the sherd. Photo by Katarina Botwid.

Other signs visible in the artefact that may be of importance for the interpretations are how it was placed in the grave. The vessel with a loop-like haft and the side surface where the decoration is visible and mostly intact is shown in Fig. 4, and the opposite side, where the sherds have broken away from the vessel in Fig. 5. The breakage pattern suggests that it was caused by frost, in the process known as spalling. This would have happened through moisture being absorbed into the porous material, after which the temperature dropped, freezing the water within the clay and causing the ware to "explode" from within, splitting it open. Such sherds are unique because they have only one outside or one inside surface, while sherds from a vessel that has been crushed or damaged by pressure has both an inside and an outside. It can be seen from the reconstructed vessel that one side has been more exposed to frost and spalling, which indicates that the vessel must have been lying on one side, as the spalling pattern would have been different if it had been standing upright.

Artisanal interpretation, find 16

Description in the inventory of finds: *Vessel. Clay. Thin red-brown ware. Slight bell-shaped rim. Weight 69.1 g.*

Description: This find consists of ten sherds. One larger one has become reattached to a smaller one, and these two sherds are from the mouth/rim of the vessel (Fig. 6.). The curvature of the opening implies a diameter of about 180 mm. This is a highly interesting find. The type and craftsmanship of this vessel render it completely different from the other finds. The ware is very fine, and the walls are thin, well made and even throughout (Fig. 7). The rim is very even and the lip is slightly thicker, which is a feature indicative of *professional artisanal knowledge*. The wide mouth of the vessel indicates that it was larger than the others. Large vessels are more complicated to produce and the artisan must have acquired the knowledge to master this degree of technical complexity (Budden 2008:3). The height of a vessel is often at least as great as, or slightly more than, the diameter of its mouth. Considering the curvature of this vessel, it is possible that it was 200–300 mm in height. This combination of size and shape again lead us to evaluate it as having been performed by an artisan with *professional artisanal knowledge.*

The clay itself is very fine, implying that the vessel was fired at a high heat and was allowed to cool without any attempt to reduce the amount of oxygen. All of the sherds are therefore a deeper orange, in accordance with the colour scale that occurs when a ceramic object is reduced, whereupon it is possible to see a wide range of colours from silver-grey (deepest reduction) to cold black, then warm black and light-grey, which grade to grey-orange that becomes more and more orange with more oxygen until you see a clear brick-orange colour. The colour of this specific clay turns from yellow to brick-orange when fired (my own experience) and these sherds are harder than the other vessels, indicating a higher firing temperature. I suggest that this vessel was fired at over 1000°C, maybe 1030°C, as there are no traces of vitrification as is common when fired at 1050°C or over. This information indicates that the vessel may have been produced in another tradition. If the vessel was made in the activity areas of Sjogerstad, it was probably oxidation fired on a bonfire that was not covered with any organic

material, but rather it was allowed to be fired and then cooled while fully oxygenated. If the vessel was made elsewhere, it may have been fired in a simple kiln with an oxygen-rich atmosphere. The form, the craftwork and the high firing temperature embodied in this vessel demonstrate that it was made by someone with *professional artisanal knowledge*. Further inquiries, investigations and comparisons of the two crafting styles through microscopic analysis of the sherds could give an answer to the question of the original production site of this vessel, or at least help us to decide whether the vessel was produced in Sjogersta.

Contextual link to find 12 and 1F1118

> "Context is a vital but problematic aspect of all activities in which one must find or create meaning. All meaning is derived from context, while at the same time, all context is, in one way or another, a construct". (Andrén 1997:160)

After examining the ceramic items, I turned to the other finds in the excavation area. According to the archaeologist Elisabeth Brynja, find 12 was very uncommon and attracted her attention right away (Elisabeth Brynja, pers. comm. October 2007).

After I had finished the artisanal analysis of the ceramic items, I learned from Catharina Axelsson that finds 12 and 16 were related. She felt that my artisanal interpretation of find 16 was particularly interesting in that it supported the archaeological interpretation of find 12 (Catharina Axelsson, pers. comm. October 2007). The find concerned, a piece of cast bronze about 28 X 28 mm which depicts a bearded man with an upside-down bird on either side, lay together with charred bone remains of a man who had been approximately 35–50 years old when he died, and the sherds of the vessel from F 16 (Rapport 2005:14, 18).

Once the contextual meaning of the figurine with regard to the artisanal interpretation of the ceramics became clearer, I decided to include this in my investigation. The find supports the interpretation of the unusual ceramic sherd. The interpretations of F 12 and 1F1118 are therefore subordinate to and dependent on the artisanal interpretation of F 16.

Interpretation of find 12

Description in the inventory of finds: *Metal. Bronze. Open-work. Ca. 2.8 X 2.8 cm. A bearded man with a bird (upside down) on either side. Weight 6.9 g.*

Description: The original carving for the piece was probably made of wood, and each of the ornament's angles depicts characteristics of the chisel or knife used to make it. This technique is known as chip-carving (Bergström Hyenstrand, 2005:39). The mould itself was then probably made of densely packed, fine-grained sand or clay that was first stamped with the original wooden carving and then filled with molten bronze. This wooden-stamp method made it easy to create a mould in sand or clay, and the stamp could be used repeatedly to create new moulds.

Figure 8. F 12, piece of cast bronze, Sjogersta. Photo by Katarina Botwid.

The double bird and bearded face image can also be found in a cross-shaped fastener from Hungary dated to the 4th century AD (Axelsson et al. 2004). A piece of bronze metalwork such as find 12 (Fig. 8) could have been imported. The bronze piece was interpreted as having been of religious or mythological significance. The artefact is of an early date as far as Nordic animal ornaments are concerned (Axelsson et al. 2004: 206, 228, Bergström Hyenstrand 2005:40).

Results

When it comes to the overall picture of the closed find discussed in the report 2005:14 and publication number 33, 2005 from the Västergötland Museum, the information covering the ceramic finds is quite limited. The only data included are details of the type, decoration, size and weight of the artefact. Comparing this with the information provided on non-ceramic objects, it is clear that these other objects receive much more attention. It would easily have been possible to include more information on the ceramic items, as I have tried to do in my examination, and this would

have provided more information than the limited interpretation included in the archaeological report.

The complete artisanal interpretations were divided into two parts: a general interpretation of the site and a specific interpretation that goes into detail for each artefact. Information on how the vessel was made and whether it was new or had been used before being placed in the grave would be included here, something not included in the archaeological interpretation provided.

The artisanal interpretation provides a closeness to the materials and techniques that makes for a broader picture of Iron Age ceramics and crafts, which the basic archaeological interpretation simply does not.

Find 16 differs from the other finds in these respects, and correspondingly has a different context. The urn was found together with charred bones and a metallic object deemed to belong to that particular vessel. For this reason, the urn and the metallic object received particular focus. The artisanal interpretation of the ceramic ware supported the interpretation arrived at regarding the metallic object in the grave, which the archaeologists find extremely interesting (Catharina Axelsson, pers. comm. October 2007). This proves that professionally skilled artisans can contribute useful information to the overall archaeological interpretation of a find.

One can also establish that this type of message conveyance provides an image that increases our overall understanding of the ceramics of the Roman Iron Age, artisans concerned and the methods of production that they used.

Supplementary archaeological interpretations

This section covers the ceramics and their context in the closed find. I believe ceramic finds 4, 5, 6 and 11 to be grave-goods for the dead, and the stone circle itself a kind of "vessel" to hold the body. The ceramics were newly created and meant to accompany the person to the other side, to serve the purposes of the new life to be encountered there. That the artefacts were unused may be part of the traditional or spiritual aspect of the burial, or it may imply that even the process of making them held a specific spiritual significance for the community. Perhaps everything included with the body was new, such as clothes and wooden items – things that would have disintegrated with time along with the body itself. The evaluation of the vessels showed that they was made by someone with *good artisanal knowledge*.

I interpret find 16 as being a type of funerary vessel containing the person's remains and that the item meant to go with the dead was the piece of cast bronze, which was probably not so much a burial gift as an item that the person may have owned that was buried with the body. The burial custom associated with this grave did not appear to require new artefacts for life after death. The place where the urn stood was open and the vessel was not covered with a stone circle. Instead, it was a mark in the landscape that, for some reason, remained untouched.

Find 16 could have been made in a completely different place and in a completely different context. If the vessel was made locally, it would have required an artisan with a different way of working to make an urn of this type. The evaluation of the urn showed it to be made by someone with *professional artisanal knowledge*. It is also interesting to note that the burial custom involving the urn deviates from the burials represented by the other stone circles in the area, especially considering that they both date from the same period. The unique character and function of the urn, as a vessel containing the remains of the dead, and the special bronze piece that is believed to belong to the grave, create a more varied picture of the time and place. These unusual characteristics create an image of the man buried here. I interpret the burial custom as denoting one of two possibilities: (1) The man may have been from the area but had travelled a great deal and become inspired by other ideas and beliefs. To have been a well-travelled person from Västergötland who came home and introduced the people to new ways of looking at the world could have strengthened his position in society. When such a man died he may have wished to be buried according to his new system of beliefs, i.e. cremated and his ashes placed in a burial urn. (2) Alternatively, the man may have been a foreigner who was visiting or living in the area and wished to be buried according to his traditions. In either case, he probably brought the urn with him to Sjogersta, and no matter where he was originally from, the fact that he brought it such a long way is indicative of the vessel's value. I consider the urn to have been made by an artisan with *professional artisanal knowledge* and its location, surrounded by bones, ashes and a precious bronze ornament, to signify that it was a prestigious artefact. Its placement above ground and the fact that it remained untouched showed that the man and the grave were highly respected.

Conclusions

This work with find materials allowed me to adopt the dual role of an artisanally skilled ceramist and archaeologist. By acting from within the world of archaeology,

I was finally able to use my knowledge as a ceramist to prove things that had once been only hypotheses. My hope was to add new information and broaden the knowledge that already existed in the archaeological interpretation of ceramics.

The interpretation of the finds became richer in content when it contained information about specific, unique technical features of the artefact and was accompanied by an evaluation of the ancient ceramists' artisanal knowledge.

This investigation made it apparent that a professionally skilled artisan looks at an archaeological find from a different point of view from the archaeologist as such. This type of interpretation also made it easier to see the kind of knowledge and skill possessed by such artisans. The lack of this insight becomes most apparent for archaeologists when it comes to analysing unusual finds, because these cannot be examined and interpreted with the artisanal insight necessary to define a context that would in fact support the archaeologists' interpretations of the other finds found at the same site. The urn (find 16) had not been accepted as a prestigious artefact, probably because of the lack of ornamentation, which is one of the important features in archaeological evaluations of ceramics.

Artisanal interpretation enables us to gain a clearer picture of the meaning of ceramics in people's everyday lives, and in the world as people perceived it at the time when those ceramics were created. The artisanal perspective is valuable to the overall interpretation, even with regard to the site itself and the remaining objects obtained from the excavation. I propose that the characteristics and potential place of creation of an object can affect the determination of an entire find.

This task demonstrates that artisanal interpretation can in fact be developed into a method, since the entire crafting procedure can be understood by examining the find (Andrén 1997:111). It is possible to determine what techniques and tools were used, to see how quickly the artisan worked and to appreciate the characteristics and construction of the wares. Additionally, it is possible to see the quality and consistency of the clay during the different steps in production, which firing and post-firing techniques were used and what the surroundings were like, including workshops and kilns at the site the level of skill of the artisan. The use of this method even makes it possible to interpret the relationship of this object to other accompanying finds. For example, one can determine how many ceramists were involved in making the vessels discovered at one site, which can be of assistance in determining such things as the status of given artisans. It can also help break down the levels of artisanal skill into percentages, which could possibly give clues as to whether the artisans in the area had a more general or a more specific knowledge of their craft. In this particular case, my cross-disciplinary knowledge allows my artisanal interpretation to be easily adapted to the field of archaeology.

The main thing that distinguishes artisanal interpretation from archaeological interpretation is that the interpretation becomes more complex and broadens the knowledge that can be gathered regarding all the material found at a site. The wording of the interpretation will also change, becoming more descriptive and touching on many new aspects of knowledge. The expressions and examples can take on a feeling of literary gestalt in that the whole really is more than the sum of its parts.

The totality of the reference material is broadened, and discussions can take place between professional artisans and archaeologists. Thus it may be said that literature from experts in a variety of subjects such as pedagogy, the art sciences, philosophy, archaeology and ceramics have contributed to this article.

The process of archaeological interpretation always includes the transferral of all experiences in the excavation to some kind of spatial context, and later into written form. This is often reflected upon in solitude or conveyed to an in-group of colleagues in round-table discussions at the excavation site. With this manner of telling and remembering with the aid of objects, the process of archaeology can bring many views together and open everything up to multiple interpretations and cross-examination (Andrén 1997:126).

In this day and age it is becoming all the more important to verbalise one's thoughts regarding material culture. It is necessary to formulate our ideas concerning empirical investigation, in this case in the form of an artisanal interpretation, in order to avoid ending up with an archaeology in which things that *aren't described don't exist*. Material culture must be made visible via excavations, interpretations and reconstructions.

Cooperation between archaeologists and professionally skilled artisans would achieve valuable results and provide more detailed and complex interpretations of periods in time which can only become known through their material culture. It is therefore of vital importance that the field of archaeology should be assured of the availability of a practitioner's knowledge and should trust in the statements made by that practitioner. It is, of course, of great importance that such cooperation should work both ways. Artisanal interpretations within the field of archaeology will

help living knowledge to become more widely used, described and thereby preserved for the future. The possibility to consult with professionally skilled artisans should not be easily dismissed. Many artisans are interested and willing to contribute to archaeology. The field of archaeology could be a role model for cross-disciplinary cooperation between fields encompassing areas of practical knowledge. Archaeology itself often alternates between theory and practice and has a long tradition of turning practical actions into academic text. Being able to use extensive artisanal interpretation to validate all activity in ancient societies would greatly change and/or develop our view of their economy, community structure, belief systems and status. I would like to conclude with the following quotation from the book *Pottery in the Making: World Ceramic Traditions* by Ian Freestone, Head of Archaeology and Science at Cardiff University, and David Gaimster, previously of the Department of Medieval and Later Antiquities at the British Museum:

> "Finally, experiment is crucial to an understanding of past ceramic production. From the skilled modern potter replicating an early masterpiece to the experimental archaeologist carefully reproducing the detailed characteristics resulting from a particular method of building the rim of a cooking pot, our understanding of the behaviour of clay and its response to the hand of the maker and the heat of the kiln can provide insights which are available in no other way." (Freestone & Gaimster 1997:13)

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Appendix 1

Ceramics Terminology

The following terminology is based on the expressions used in my practice-based education, and in those cases where I use the literature to explain a concept, references are provided. There are many descriptive terms in the crafting world, but I have selected to define only those used here.

Bone-dry Clay that is in the final stage in which it can still be worked, meaning that one can work the surface into a smooth, high gloss, and one can still carve or incise very thin, exact decorations without the surface flaking away.

Firing Various heating methods to change the clay into ceramics, given that these require temperatures of at least 500°C. When the clay can no longer return to a state in which it can be reshaped, it has become ceramic (Lindahl et al. 2002:30).

Bonfire firing The completely dried wares are fired directly on the ground using organic materials such as wood, peat or manure.

Burnishing A traditional method of sealing the clay before firing. In some cultures burnishing is used to create patterns using glossy and matte surfaces. Burnishing takes place when the clay is bone-dry and creates a smooth, shiny surface.

Pit firing A type of mild bonfire firing where wares are stacked in a pit in the ground and a bonfire is built on top. Sometimes the pits are covered with organic material after the firing so that the ware cools less quickly. This method creates a red-grey-black surface typical of pit-fired ware.

Banding wheel A rotating disc which allows the artisan to spin the vessel without touching it. The banding wheel is turned by hand and facilitates the formation of circular objects.

Leather-hard Clay that is no longer soft, i.e. it is somewhat stiffened but still damp and can be reshaped to a certain extent. Leather-hard is so named because of clay of this kind feels much like thick leather; it is pliable, yet firm.

Soft clay Completely pliable and plastic clay, i.e. it is saturated and not too damp or too hard.

Oxidation With regard to firing techniques, oxidation firing takes place in an atmosphere with an abundance of oxygen to ensure combustion of the fuel and oxidise the ceramic materials. In such a firing, the sherds do not become black or grey, but rather iron-rich clay turns red-orange when fired. Open bonfire firing is one example of oxidation firing.

Reduction Reduced access to oxygen during firing or cooling. In this case the iron in the clay (Fe2O3) reacts by returning to the black or grey tones that iron has when it has not become oxidised. Reduced iron has lost oxygen atoms, which occurs when an oxygen-deprived atmosphere "takes" the three oxygen atoms (O3) and only the reduced iron gives colour to the fired wares. Oxygen deprivation can be achieved either intentionally (blackware) or unintentionally on the underside, where flammable materials have remained during cooling.

Coiling A method using rope-like coils of plastic clay assembled in successive courses to build up walls of vessels or sculptures.

Sooting A simple technique used to make ceramic wares completely black and shiny. To soot objects, one can "grill" them over an open fire or bury larger vessels in straw or other flammable materials to produce intense smoke, and then later polish the vessel with beeswax to seal the surface. Aside from the black surface, sooting also helps to seal the porous, unglazed surface so that it does not readily absorb moisture.

Pinching A method in which clay objects are formed by pinching repeatedly between the thumb and fingers, or between the fingers of one hand and the palm of the other hand, smoothing them out, while pushing and turning alternately until vessels are formed.

Tournette An early version of the potter's wheel, consisting of a wooden disc turned with the feet. This allowed more freedom than the banding wheel, since it did not require the hands for movement.

Reoxidation When performing pit firings or bonfire firings in which the objects are covered with flammable materials, it is often the intention to reduce the ware during cooling. If the objects are taken out too early, or the flammable materials catch fire too quickly and begin to burn with open flames, the intended reduction can be partially or completely lost. If it is partially lost, the ware will have a grey streak through the middle when looked at in cross-section. More often, the reduction effect will be lost completely and the ware will become brick red all the way through. Reoxidation can also occur when using domestic wares that were blackened from the start on an open fire, whereupon the great heat and oxygen infusion changes the Fe2 back into Fe2O3 and the ware becomes brick red again.