

Some ethnoarchaeological possibilities in the pottery technology investigations

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ABSTRACT The study of the pottery technology in the archaeological investigation was a neglected aspect for quite a long time, mainly because an exclusively archaeological methodology, in the traditional meaning, limits the possibility of coming to conclusions outside the taxonomic frame. In the Cultural historic Archaeology where the pottery is used mainly for the stratigraphic and cultural distinction, its technological aspects did not have great importance and it was reduced to a basic distinction referring to its way of production: the hand made pottery and the wheel made pottery. Beside that, it was considered, for

example, that term “hand made” is telling everything about its technological characteristics. But, is it so? In order to be able to respond to this question we have to get to know all the varieties and possibilities of elaboration of the ceramics, at least the ones still conserved. This article will try to show the possibilities of ethnoarchaeology in the investigations of the pottery technology using some examples of the Iberian Peninsula and the Balkans, putting emphasis on hand made pottery still resisting in south of Serbia and north of Macedonia and in Spain.

Every archaeologist specialized in the study of pottery knows that the technology of pottery-making has largely been neglected, mainly because the limitations of archaeological methodology tend to keep inferences within the bounds of taxonomy. In fact, traditional archaeology, using pottery mainly as an aid in discriminating between strata and cultures, has not attached great importance to its technological aspect and contented itself with a basic distinction between two modes of manufacture: handmade or wheel-thrown pottery. This smallest but for the culture-historical school sufficient piece of information has been of secondary interest itself. Prehistoric archaeology, for example, has not even found it necessary to attach the “handmade” tag, almost all prehistoric pottery being made by hand. Furthermore, it has held that the specification “handmade” by itself says everything there is to be said about it. But, does it? Is all handmade pottery really made in the same way? As a rule these questions have not even been posed.

To an extent this problem arose in archaeological investigations of the Iron Age. At sites dated to that period handmade pottery, the one that forms part of a typical inventory, was found in association with wheel-thrown pottery that excavators often did not know what to do with. If circumstances allowed, the wheel-thrown pottery was completely ignored. At sites where its amount was impossible to ignore, it was automatically labelled as an import or an intrusion from upper layers, even if there were no upper layers. In this way a significant amount of important data was lost that could have improved the investigation of many sites over the decades.

Why is that so? Mainly because some of our colleagues have not understood that the meticulous, deepened and all-inclusive study of pottery is a necessity. Although one of the most eminent students of pottery, Ann Shepard, pointed to the necessity of such studies as

early as the mid-1950's (Shepard 1956), and although at many archaeological conferences attention has been drawn to the importance of pottery within the framework of archaeological research (emphasizing that the study of pottery does not end with description and classification), we can say that every effort in that direction still begins and ends in expressions of mutual support within the small circle of experts who have chosen to dedicate their professional career to the study of pottery. The majority of other archaeologists do not see the problem, and if they do not see it the problem does not exist. But, the fact that we cannot see a problem does not mean it is not there. The problem does exist and it requires a serious treatment.

The technology of pottery-making is only one of many aspects of pottery studies. The ultimate goal of those studies is not, of course, to identify the technological characteristics of prehistoric pottery. The goal is to establish a more palpable relationship between the pottery and its makers and users, and to understand the significance that the pottery may have had in a wider context (Arnold 1988, 17), which in turn brings us closer to the ultimate goal: a socio-cultural explanation of processes and changes, and of their causes.

We often know from the archaeological record that changes did happen, but what we do not know about this dynamic of change is how, why and with what intensity (Binford, 1978, p. 1). That is why archaeology is forced to look for solutions further afield. At this point, the most promising way out of the impasse to which the nature of finds takes us (since, by definition, the past is not accessible directly) is to be found in experimentation. The possibilities in this field are manifold. One of them is so-called indirect experiment or ethnoarchaeology, in which diverse types of societies ("primitive" and "civilized") can be transformed into a living laboratory (Kobylinski, 1989; Hodder, 1982). Through the replication of ethnoarchaeological observations in different social, cultural and environmental contexts we can establish a pseudo-experimental procedure which is much more reliable than the traditional archaeological method (Kobylinski, 1989, p. 122-123).

A prudent use of ethnoarchaeology and a proper balance between different models gives an archaeological problem a good chance of being successfully solved in the future.

Also, it is necessary to achieve a proper balance between the archaeological method and the implementation of models. If achieved, it could provide information about what we can expect to find by excavation, and help us improve our excavation strategy by taking into account some aspects we have previously overlooked (see Van der Leeuw 1999, 116).

The earliest vessels were made by hand. The technique is as follows: a piece of clay shaped into a ball is held in the palm of one hand and a hollow is made in the middle of it with the thumb of the other hand. Then the hollow is widened and the walls thinned with fingers. Some old potters in the Canary Islands still use this technique called "ahuecado" (Llorens Artigas and Corredor Matheos, 1970).

But, that is not the only way to model a vessel by hand. We shall see it from the examples from the Balkan and Iberian Peninsulas. It seems necessary, however, to warn that the practices described here may be dying out as we speak. As a result, the present tense used in this contribution is perhaps an overly optimistic view of events.

We shall begin with the Balkans where a very rudimentary technique of handmade pottery still survives. This simple method of manufacture reveals not only the process of modelling, firing and use of ceramic products, but also the rites and customs associated with it. (Fig. 1)

In the Balkans certain types of ceramic products are made exclusively by women and for home use only. For that reason, this kind of pottery is designated as "female" (Filipovic, 1951, p. 39-43).

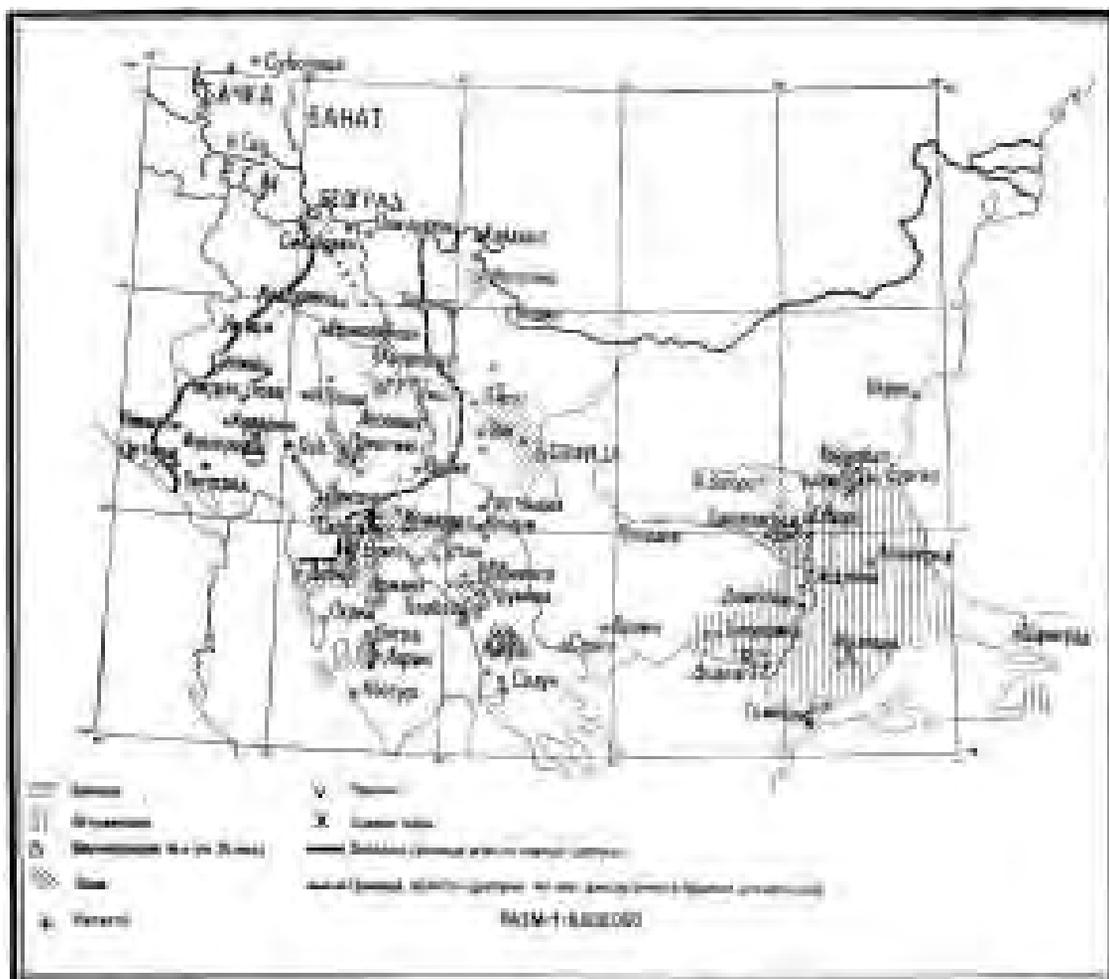


FIG. 1 – Map of female pottery in the Balkans, first half of the 20th century (Filipovic, 1951).

In the extraction, transportation and preparation of clay men sometimes help women, but women usually organize themselves in groups dependent upon the distance and accessibility of sources of clay. The clay is loaded onto animals, but sometimes women carry sacks on their own back to the house of one of them, or each takes a sack to her own house. Then the clay is spread on a large cloth, crushed and sifted in order to remove all impurities. The following step is to immerse the clay in water, where it remains from one hour up to 20 days (Filipovic, 1951, p. 49), which depends on the quality of clay. Once the surplus water is removed, the clay is spread again on a large cloth and the women begin to tread it. It is important to note that in the villages in southern Serbia, northern Macedonia and eastern Kosovo where the manufacture of female pottery still survives, this activity is known as “treading the bread casserole” (information by B. Sikimic). The clay is treaded and hot water added as many times as necessary for the paste to attain the requisite consistency for modelling. (Filipovic, 1951, p. 49-65; Tomic, 1983, p. 18).

Different clays require different temper: straw, flour, sand, cow- or goat-hair, horse or cow dung, calcite, grog etc. In order to make bread casseroles (which constitute the main shape of female pottery in the Balkans) a secluded place has to be chosen either indoors or outdoors (a shed, a cellar, a corner of the yard, etc.) because the casseroles have to be left *in situ* to dry. Whether the casserole is left to dry in a shady and lee place or exactly the opposite depends on

local tradition and, of course, on the type of clay (Filipovic, 1951, p. 65-66). The very place where the casseroles are going to be modelled (on the ground, or sometimes on a wooden base) is sprinkled with ash. Modelling is a job for more experienced women. The clay is kneaded into balls and put on the already prepared base. Then each ball is beaten flat with the hand, foot or a tool in order to form the casserole's bottom. Then the rim is shaped by pressing the paste with hands, wet in this case (Filipovic, 1951, p. 59-65; Tomic, 1983, p. 18-21).

After the period of drying, which can take a few days to several weeks the casserole is used for the first time which is also the first firing of the vessel in the domestic hearth.

This casserole for bread called *crepulja* is a low circular container with flat bottom 30 to 60 cm in diameter, and 3 to 5 cm thick. The casserole's rim, which is also its wall, is up to 5 cm thick and 3 to 9 cm high, which depends on the diameter. They are used for baking bread in the open fire of the domestic hearth. Their varied size is due to the varied needs of families: in large families larger casseroles are used. It should also be borne in mind that, in earlier times, bread was not baked every day, but about once a week. The casseroles are made when the need arises, but usually once a year (on 20 May, St Jeremiah's Day). Their varied sizes and poor quality of manufacture may also be ascribed to a lack of experience (Filipovic, 1951, p. 15-17).

Bread casseroles are usually plain or very sparsely decorated, but when they are decorated it is always with the impressed motif of a cross, which is thought to have the magical power to protect the bread, the house and the family. The way of baking bread in them is more or less the same everywhere. While the dough is being prepared the casserole is warmed either suspended over fire or placed upside down on ceramic pads (*topka*) or stones. Once warmed up, the casserole is removed from the fire, wiped with a clean cloth, sprinkled with flour and then the dough is put into it and spread so that it covers the entire bottom. The casserole is placed onto the pads (*topka*) and covered either directly with live coals or with a lid (*vršnik*) on which live coals are piled (Filipovic, 1951, p. 22-23, 27-39).



FIG. 2 – Casseroles for bread (*crepulja*), Lids (*vršnik*), Pads (*topka*) from Serbia (Tomic, 1983).

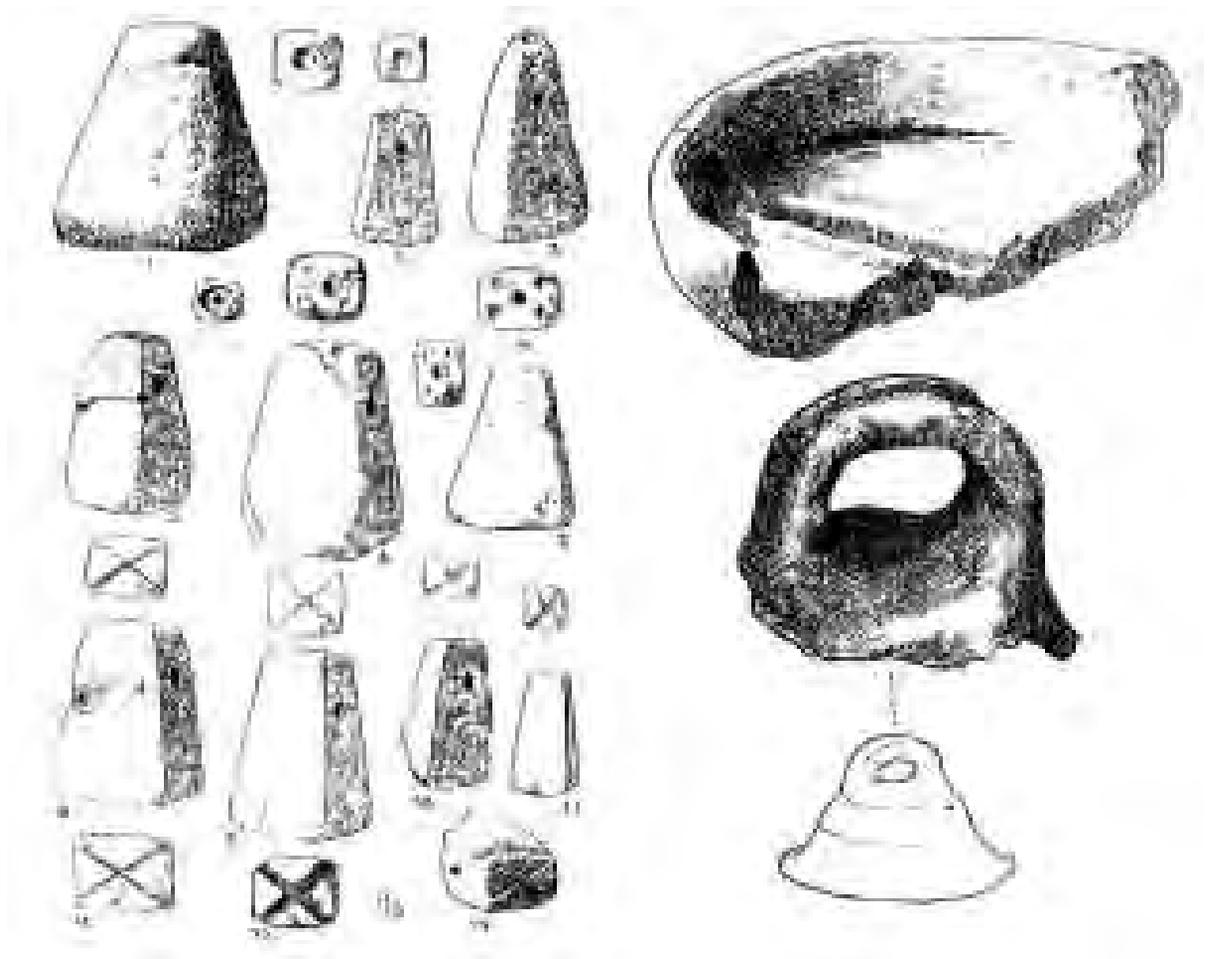


FIG. 3 – *Crepulja*, *vršnik* and *topka* from Donja Dolina/Bosnia and Hercegovina (Truhelka, 1901/1914).

The lid is semi-spherical or conical. A hole or a handle in its upper part enable the user to remove the lid from the fire. Such lids were already difficult to encounter in the first half of the twentieth century, and today it is virtually impossible (Filipovic, 1951, p. 73-78; Tomic, 1983, p. 18).

In addition to casseroles and lids, clay is used for making pads (*topka*) supporting the casserole in the domestic hearth, and quite exceptionally for bread ovens and stoves for heating rooms (Filipovic, 1951, p. 9) (Fig. 2).

The pad (*topka*) is a clay object in the shape of a truncated pyramid or truncated cone. It has a perforation in the upper third part and its top surface is divided by two grooves forming a cross. Its main function is as a support for vessels in the hearth, but it was also used as a loom weight (the function that archaeologists are more familiar with). In the latter case, more attention is paid to their manufacture, their upper part is elongated, and they are fired before use, which is not necessary when they function as casserole pads (Filipovic, 1951, p. 91-92). The pads, lids and casseroles were always made in one go and from the same clay. Usually more than three pads were made, three being the minimum number to ensure the vessel's stability in the hearth. Although the method of manufacture is very simple, their shape varies significantly from region to region and even from village to village (Filipovic, 1951, p. 81-96; Tomic, 1983, p. 20).

As a rule archaeologists identify such objects as loom weights. There are ethnographic data suggesting that these “weights for the loom” may have been used as pads for vessels.

The problem is in that ethnographic observations have not received much attention in archaeology. Such denial of the possible (and very probable) function of these artefacts in the hearth comes as a surprise considering that researchers not only wrote on the subject as early as the beginning of the twentieth century but indeed emphasized their function as pads as their principal function, and, also, that their shape and dimensions (5 to 7,5 by 4,5 to 5,5 cm) make them a perfect match of modern pads (Hoernes 1909, p. 19; Curcic, 1909, p. 158; Truhelka, 1914, p. 58, 94).

The three shapes of female pottery in the Balkans are the most basic shapes for domestic use, which gives us grounds to regard them as being among the oldest forms of utilitarian pottery. Their occurrence is well-documented from the Neolithic to the present day, although their continuity is not always easy to recognize at the local level. They have been archaeologically ascertained in prehistoric layers in Bosnia-Herzegovina: Butmir near Sarajevo (Neolithic), Ripac and Donja Dolina (Bronze and Iron Age) (Truhelka, 1901, p. 227-287, T. XIX-XXI, XXV, XII, 1914, p. 83); in northern Dalmatia (in the Iron Age Liburnian culture) (Batovic, 1987, p. 372, T. XXXV/14), etc. (Fig. 3). These pottery shapes also occur quite often at medieval sites in Serbia (Bajalovic Hadzi-Pesic, 1982, p. 6).

In the Iberian Peninsula, more precisely in Spain, handmade pottery has survived in several centres practically until the end of the twentieth century, though for the most part reduced to the production of wine containers known as *tinajas* (Fig. 4). The available information shows that the making of pottery by hand is virtually the same in all the Spanish cen-



FIG. 4 – Map of hand made pottery in Spain.

tres where it is still practised. (Llorens Artigas and Corredor Matheos, 1970; Álvaro Zamora, 1980; Sempere, 1982; Romero and Cabasa, 1999).

The trademark of this production is coiled pottery. The process begins with the extraction of clay, which then is transported to the place where vessels are to be made. The clay is spread on the ground in front of the workshop and crushed with a horse-pulled roller.

The next step is to sift the clay in order to remove impurities and to heap it up. The heaps are mixed with water and treaded. The complex operation of modelling is carried out in seven steps and requires equipment, first of all, a support on which the vessel is to be modelled. On this indispensable support stands a three-legged round plate, also made of clay and in several sizes. On them vessels are modelled and left to dry. The potter's indispensable equipment includes two wooden tools, *paleta* and *broquel*. The *paleta* is a flat



FIG. 5 – Modeling with *paleta* and *broquel* (Ramos and Cabasa, 1999).

and wide piece of wood with a handle and the *broquel* is hemispherical. With the *broquel* in the left hand the potter is modelling the vessel from the inside, while beating it into the desired shape on the outside with the *paleta* held in the right hand (Fig. 5). The seven steps of the process are as follows: the bottom is made first; then the lower part and the upper part; the spherical shape is formed with the *paleta* and *broquel*; in the end the rim which has been previously made, is added and, if necessary, the handles.

The difference between the two examples, Iberian and Balkan, is obvious. Although much more sophisticated and technologically more advanced, the Iberian production is nonetheless relevant to ethnoarchaeological investigations, especially because it demonstrates the technology of making large-sized pieces not only in prehistory but in later periods too.

And yet, I have put emphasis on the female production of the Balkans because of its distinct and archaic quality.

Can the term “female pottery” for this kind of ceramics be extended to encompass other regions and other periods considering that in archaeology handmade pottery is usually attributed to women? In all probability it is true in most cases, but we must not forget that we are not dealing with a rule that has no exceptions. It is indicative that many photographs taken in Serbia in the first half of the twentieth century show this pottery, supposedly made by women, being made by men.

Also, the Iberian example reveals all the complexity of the problem. Handmade pottery is normally made by men, while women are allowed to practise the craft only before they marry. It is interesting to note that the last potter in Villarrobledo was a woman (Ramos Pérez, 1976; Sempere, 1982; Vossen et al., 1980; Llorens Artigas and Corredor Matheos, 1974).

As we can see, the Balkans and the Iberian Peninsula are diametrically opposite in terms of the sexual-social division of labour in pottery-making. This demonstrates clearly how misleading it may be to jump to conclusions and how vital it is to make use of accurate information.

Also, the Balkans and the Iberian Peninsula show different levels of professionalism within the craft. The levels of professionalism in contemporary pottery-making are established and scholars are agreed on their definition. They divide it into three groups — non-professional, semi-professional and professional — although they often name the three levels differently (see Peacock, 1981, p. 188-190; Tomic, 1983, p. 58-63; Arnold, 1988, p. 18).

These models may also be applied to the prehistoric production of pottery, but there should be no generalization considering the differences that we have detected between the handmade pottery of the Balkans and the Iberian Peninsula. Let us remember that the production of handmade pottery in the Balkans is a clear example of the non-professional level because it is intended exclusively for personal use. In Spain, on the other hand, its production is semi-professional or professional, which depends on the centre of manufacture and of the type of pottery produced. In the case of jars (*tinajas*), for example, the presence of factories and of specialization, from preparatory stages to the market, obviously classifies this production as professional (Romero and Cabasa, 1999).

Why does this paper insist on the European traditional pottery? In spite of differences observable at local level, it is quite likely that pottery-making has continuity since prehistory, or from the moment of the discovery of each technique to the present time.

At the local level, socioeconomic and sociocultural changes and migrations that took place over time prevent us from following the continuity farther back into the past, but the craft or, rather, the knowledge of the craft was transplanted to new territories and, if the newly-settled territories had already been occupied, an exchange of the different practices of pottery-making was possible.

If we accept the idea of continuity as a plausible assumption, it may give us the possibility of tracing more parallels between the present and the past. Of course, to draw such parallels is only appropriate at the level of technology. To apply them to other levels of research could be dangerous and misleading, because societies at different levels of economic and cultural development are not comparable.

Archaeological investigation, ethnological observation and experiment are essential for obtaining a coherent picture and for drawing valid conclusions not only about technology, but also of its position and role within a society. Each of the three perspectives provides specific information, but it is only from the combination of the three particular pieces of information that we may begin to form the full picture (van der Leeuw, 1999, p. 115-132).

Obviously, this contribution cannot be called ethnoarchaeology because ethnoarchaeological investigations into the traditional pottery-making in the Iberian Peninsula and the Balkans have not been carried out yet. And for one simple reason: lack of money.

Therefore, the goal of this paper has been to emphasize the importance and necessity of ethnoarchaeological research within the study of pottery. It should be understood as an attempt to raise some important questions and stress some that have already been raised, and to underscore how essential it is not to overlook the last living sources of an activity liable to provide information that can bring us a step closer to our ultimate goal, which is to get to know the past and to understand its dynamics.

NOTES

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