

The Gold of the Avars
THE NAGYSZENTMIKLÓS
TREASURE



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*The Nagyszentmiklós Treasure as the Subject of
an Archaeology of the Future*

INTRODUCTION

More than two hundred years ago, in the year 1799, one of the most important archaeological finds from Early Mediaeval Europe was discovered in what is now the Romanian part of the Banat. As the Banat was part of Hungary, the hoard is known as the "Nagyszentmiklós Treasure". It consists of 23 vessels, mainly bottles which had been changed to jugs, bowls, two cups, two bowls with handles and a drinking horn. The total weight of the vessels is 10 kg gold of different standard.

Nevertheless, it is not the material which makes the treasure so valuable, but the fine quality of metalworking, the beauty of some of the vessels, but especially the fact that it constitutes a unique source for research on cultural links in central and south-eastern Europe in the seventh and eighth centuries. More than 50,000 graves from this period are known from the Carpathian Basin — the region of Avar settlement — alone and some of them contain archaeological material which is very informative. Nevertheless, the cultural influences which affected the south-eastern part of Central Europe entered those social strata which we can grasp from our cemeteries and settlements only through a kind of filter. The fact that the wide public only adopted a

small selection of the "trends" current among the ruling and — remarkably well informed higher classes is often referred to as "trickle-down-effect", which alludes to a technical term which is common in the economic sciences. But even the highest social strata never adopted anything thoughtlessly, or just as it is. For representation, the traditional (traditional elements are important for the identity of a group) was mixed with the "modern", foreign. By taking part in certain fashions and adopting foreign elements, one's openness to the exterior may be shown and one can demonstrate relationships and connections with the comparable "high society" on the other side of the border, to whom a leader frequently may have felt closer than to his own people. A treasure like the one from Nagyszentmiklós allows us to perceive the surrounding material culture from a different point of view: that of the ruling class. However, it is laborious and — without the new archaeological methods virtually impossibly — to decipher the complicated code which underlies all those vessels: This is the subject of the following essay.

What could the Nagyszentmiklós Treasure reveal to us — provided we ask the right questions ?

1. QUESTIONS AND METHODS

The list of research questions with which we could confront the treasure ranges from the historical circumstances under which it was made and buried in the ground to the individuals involved in its production and the "customers", whose political programme was supposed to be integrated and made visible. There are also general technological questions and those concerning the origin of the different raw materials.

Even if the find circumstances suggest that the treasure was buried together at a given point in time (and therefore must have existed as a unit also above ground just before this event took place), this does not imply that the individual vessels were in fact made at the same time. Therefore, each vessel must first of all be analysed individually. Only then can we say which vessels were

made at the same time, which groups were made earlier or later. The place of production and the goldsmiths or workshops must not necessarily have been identical. Now, at the latest, we must compare the various parts of the treasure with other finds and works of art, in order to obtain criteria for further interpretation. In the course of this comparative process, we should be able to obtain evidence for the absolute date of individual vessels or groups of vessels.

Once the time and place of production are known, we can reflect on the question for whom and for what purpose the vessels were made. Which foreign cultural influences are illustrated by the individual vessels? What kind of cultural and religious background may be discerned? Is it Christian or pagan, has the

goldsmith understood the motifs or not, have the models been altered? Have the vessels been made for personal use or as a diplomatic gift?

Apart from these general historical questions, we may now inquire more specifically: What is the relationship between the valuable vessels with their motifs, special combinations of ornaments and techniques and the contemporary, "normal" metal dress ornaments from the same region? Have our vessels merely been made more elaborately or do we find motifs which do not occur in the basic archaeological material? Is our master-craftsman capable of techniques which are not standard procedures? Here, we are able to observe the "trickle-down-effect" mentioned earlier. Let us assume that — as is to be expected — we find out that the spectrum of motifs represented within our treasure surpasses that of the more humble archaeological material, then how should this fact be interpreted? Here, there are always several possibilities and therefore intensive research and comparisons will be necessary. Presumably, it may even be possible to detect that certain motifs were either preferred or avoided by "ordinary people", perhaps for religious reasons or due to the general set of social values (for instance, pigs and snakes usually have negative connotations in our society). In the ruling classes, however, there is a desire to integrate foreign elements into rep-

resentation culture and as a result, there is a higher tendency to break taboos than among the ordinary people.

One of the more specific research questions is concerned with the technological standard of a region at a particular time. Naturally, we are interested in how each individual object was produced, in the way the metal was obtained, alloyed and worked. How was it hammered, chased, soldered, welded, how was the glass inlay glued and the incrustations fixed?

Each gold vessel has its own, individual history. Some of the vessels were doubtlessly used for several generations and have been altered, complemented or re-worked, show characteristic traces of wear or more recent inscriptions, which have been scratched into the surface of the vessel. These changes or supplements sometimes correlate, thus permitting historical interpretations. Therefore, the individual histories of the vessels are linked and seen as a whole, they give a complex historical picture of the treasure which, in turn, will be integrated into the history of Central and Eastern Europe. However, it will be some time before we reach this point. Research carried out so far has been biased, tainted by prejudice, some of it has been carried out carelessly and by no means meets the standards of modern archaeology.

2. TECHNOLOGY AND CHEMISTRY IN ARCHAEOLOGICAL INTERPRETATION

Oskar Montelius, who used typology as a method for classifying the archaeological material, may be regarded as the ancestor of modern pre- and protohistoric research. Montelius noted (1903) that the shape and decoration of objects (naturally also those of modern date) does not change suddenly, but gradually, in small steps. He established typological series and attempted to check the validity of the models he had established for the developments observed with the help of "closed finds". These are groups of archaeological finds which have been buried at the same time. Only little later, Gustaf Kossina used the joint occurrence of types and especially their spatial distribution to form cultures, which he then interpreted historically as tribes, peoples or races. This "settlement-archaeological method" was implemented by National Socialism and abused as one of humanity's worst crimes so far, but this alone would not suffice as proof of a theoretical error. However, such an error did in fact occur, in that Kossina's method fails to take into consideration the nature of ethnic perception, its function as an instrument of power, but especially in that it ignores the way any social code system works. It is simply nonsense to assume that social group consciousness is reflected by "material culture", which is determined by an almost endless number of internal and external factors. Especially protohistory, where written sources serve as a

corrective, is full of examples where political units with a national consciousness, which has survived up to the present day, do not show up in the archaeological material (for instance Alamanni — Baiuvarii). Of course, in some cases, such group insignia may have existed. However, it will be necessary to prove in each individual case that they possessed this symbolic meaning.

However, these critical notes do not imply that the shape and decoration of archaeological objects is in fact less important. The shape of objects, not just of tools and weapons, first of all, depends on their purpose. Only a knife, which looks like a knife, can be used as a knife. Nevertheless, this permits an endless range of variations, which are influenced by the contemporary sense of beauty, and all kinds of ornaments. Frequently, ornaments or motifs may carry messages. They can say something about their wearer, about her social level, her age, her function in society, her demands. Again, much comparative research will be necessary in order to comprehend the social symbols which are hidden in the archaeological material. The meaning of objects cannot be deduced from the examined object alone. Each individual object, each individual grave complex must be analysed by itself in order to then be able to put all the separate pictures together. In the end, we obtain an extremely lively overall picture of the society examined by means of the archaeological method.

However, it is easy to copy shape and ornament. Again, some examples to disillusion traditional archaeologists may be stated, for instance Alamannic pottery from Southern Germany, which cannot be distinguished from its Roman models. Only with the help of a series of chemical analyses is it possible to prove that they are in fact products of local workshops. In this particular case, the Alamanni used local sources of clay, but Roman technology and we may therefore assume that Roman specialists were employed to run the workshop. Shape and ornament alone are easy to imitate, but in the common technique and with raw material which occurs, or is available, locally. It takes years of practice and experience to master technological processes, especially those where invisible chemical or physical processes take place (reducing ores, alloying, hardening and so on) and particularly if they make use of unfamiliar raw materials. To make a long story short: Chemical and technological analyses of archaeological materials are a much more solid basis for settlement-historical models than typology according to shape and ornament. But as shape and decoration may transport symbolic meaning, all three have to go hand in hand in order to fulfil our aim of interpreting archaeological finds historically, as stated previously:

- the antiquarian analysis of shape, decoration and motifs according to the traditions, models and meaning of objects within the social code,
- the chemical analyses, for instance regarding the origin of the raw materials used and
- the technological analysis.

We can refer to these three ways of examining an object with the respective set of data as "the archaeological triangle", which constitutes the pre-requisite for any well-founded historical interpretation of archaeological material.

Links between the different categories of criteria are of course possible. In this way, the use of a particular technology may be perceived as increasing the value, or alternatively, a certain type of raw material may itself have possessed meaning (for instance gold, silver, ivory, garnet or whaleskin from the Red Sea to cover a sabre handle).

Today, chemical analyses of metal objects can usually be carried out carefully with the help of X-ray fluorescence analysis (XFA) or with a mass spectrometer (ICP-MS). For analysis in the most recent generation of mass spectrometers, small amounts of material are vaporised

with the help of a laser beam and the resulting mixed elements in gas form analysed (ICP-MS-LA).

Technological analyses may be carried out in many different ways. In many cases it is sufficient to use a magnifying glass or a stereo microscope in order to be able to discern the traces left by working the raw material. Each production process, hammering, chasing, soldering or riveting, the manufacture of beaded wire or the arrangement of granulation ornaments, leaves characteristic traces. Toolmarks can sometimes be as characteristic as a footprint. However, it is often impossible to make detailed comparisons with an optical microscope, because it does not allow for precise measurements of tool marks. Presently, Scanning Electron Microscopes, whose most recent generation generally can be applied in many ways in archaeology, are used for the most precise research. The so-called atmospherical Scanning Electron Microscopes (EESM) not only permit the examination of metal objects and gold-spattered structures, which is already standard procedure, but also of organic and even moist objects. Furthermore, it is no longer necessary to establish a high vacuum in such an instrument. Today, atmospherical Scanning Electron Microscopes are used to examine glass, pottery, wood and all kinds of macroscopic plant remains, textiles, leather and much more. With the help of Scanning Electron Microscopes, brilliant and extremely plastic images of tiny structures may be obtained and moreover, they can be measured precisely. Integrated analysis facilities permit precise chemical research, in that the surface is scanned and the chemical composition of the structure which is being examined may be determined.

As it is not possible to carry out technological and chemical analyses everywhere and at any time — because they are expensive, for one thing — even in the future, one will have to accept that some researchers may still base their historical theories exclusively on antiquarian arguments. Archaeological research of present or future standard will nevertheless make use of adapted natural scientific methods in order to obtain additional sets of data for a focused historical interpretation, as has also been justified from a theoretical point of view. Archaeology of the present or future must make use of methods adapted from the natural sciences or it will cease being a scientific discipline.

3. A RESEARCH PROGRAMM ON THE NAGYSZENTMIKLÓS TREASURE

Since 1995, an international research project on the Nagyszentmiklós Treasure is being carried out in Vienna, according to the principles stated in Chapter 2 and directed by the authors and HR Dr. Kurt Gschwantler (Kunsthistorisches Museum -

Antikensammlung). First of all, the chemical analysis of the individual gold vessels was carried out by means of non-destructive X-ray fluorescence analysis at the Atomic Institute of the Universities, by Univ.-Prof. Dr. Peter Wobrauschek, Dipl. Ing. Dr. Christina Strelt

and their team. The surface of each part of the vessel (body, soldered-on parts, handles, inlays) was stimulated by means of a radioactive source or an X-ray tube and the reflections which are characteristic for the various elements, analysed. Smaller details, such as tiny traces of solder or incrustations must, however, be examined with the so-called Atmospheric Scanning Electron Microscope (EESM) described above and their chemical composition analysed. The results of chemical analysis are interpreted with the help of statistics, thus revealing the relationship between the individual vessels and parts of vessels. The next step is the technical examination by the restorer Mag. Viktor Freiburger (Kunsthistorisches Museum — Antikensammlung), who will attempt to reconstruct the complex production process and the individual history of each vessel (wear, re-working, additions, scratch-marks and so on). Only then will it make sense to carry out the antiquarian analysis, in order to prevent that parts of a vessel which have only been added much later, would be regarded as contemporary, thus resulting in a completely incorrect interpretation. The Scanning Electron Microscope will also play an important role in comparing the various scratch-marks (for instance the "runes") and the tool marks, as it permits us to measure the characteristic marks precisely. It will be very important to classify the numerous scratched marks - which were added only after the vessels had been completed — also according to technical criteria into (chronological?) groups. Additionally, a computer-graphical reconstruction of bowl Nr. 19, which had formerly been decorated with glass inlay, was carried out as part of the Viennese research project on the Nagyszentmiklós Treasure and is depicted once more in (Fig- V-

While the chemical and technical research on the treasure is being carried out, a specialist for Avar archaeology is already compiling those finds which are relevant for comparison with the hoard. The data and pictures which have been collected in this way are then stored in a picture data base. Its main features already exist and it is being used intensively.

The antiquarian analysis of the treasure will be carried out by a group of researchers from Bulgaria, Germany, Austria, Russia, Hungary and the United States. It will include specialists for Byzantine vessels, Early Christian, Avar, Bulgarian and Sassanian archaeology, for



Fig. 1 Graphical reconstruction of bowl 19.

Early Medieval steppe cultures and for art history. The members of the project will prepare themselves with the help of an extensive photographic documentation and the results of the chemical and technical research and then study the treasure in detail. The group will then discuss its results during a conference and publish it in two volumes. While the first volume will contain comprehensive documentation on the Treasure, including all kinds of chemical and technical data, the detailed images recorded with the Scanning Electron Microscope, X-Ray images, research on goldsmithing technique and the graphical illustrations, the second volume will present the antiquarian research as well as a summary of the history of the Carpathian region and the Balkans in the late Early Medieval Period.

In a detailed summary the individual lines of argument, the results of all the preliminary and specialised research will be brought together. Here it will become clear to what extent a focused interpretation of the treasure is possible and how precisely the time and place where the gold vessels were produced may be determined.

The project should be completed in 2005.