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Reviewed Article:

Popularisation of Experimental Archaeology in the Activity of Harjis - Project under the Patronage of the Institute of Archaeology of the University of Lodz (PL)

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This article outlines our experiences gained during the implementation of activities at the Society of Experimental Archeology *Harjis*. Our society aims to recreate dress, weaponry and the realities of the Przeworsk culture, that is, people living in the first centuries of Common Era in the territory of present-day Poland. In scientific activity, we are mainly dealing with experimental archaeology by performing experiments in the field of handicrafts such as blacksmithing, carpentry, leathercraft, weaving and pottery. Practical experiments that we carry out are preceded by the interpretation of historical and archaeological sources. We also carried out statistical surveys in the field of ethno-archaeology. We run tests on replicas of various types of weapons that were used in prehistory. The project is complemented by an attempt to reconstruct the nutritional management of Przeworsk culture and, as a result, reproduce the 'Barbarian' cuisine.

Despite its great potential, experimental archaeology in Poland is still one of the less understood and accepted methods of science. It is struggling with the need to find new ways of popularisation. In this paper we present our methods of disseminating the history and archaeology that we practice.

> Experimental archaeology often goes hand in hand with popularisation. In Poland there are no lessons about prehistory at any level of education, or if there are any extracurricular lessons, they are limited to ancient Greece and Rome. That is why it is so important to show people that this region of Europe also has its own interesting place in history. We have taken some actions in order to bring local ancient history to young people.

What is The Society of Experimental Archaeology *Harjis*?

Our group, the Society of Experimental Archaeology *Harjis* has been informally active since 2009. In our first active years we focused mainly on the popularisation of archaeology. For the last three years the primary direction of our activities concentrated on widely understood experimental archaeology. Thanks to this attitude we have gained the official patronage of the Institute of Archaeology of the University of Lodz.

The Society of Experimental Archaeology *Harjis* runs a project that focuses on recreating dress, weaponry and realities of everyday life of the Przeworsk culture, ancient people living in the first centuries of Common Era, on the territory of today's Poland.

Our activities are also based on experiments in the field of such crafts as smithing and ironwork, carpentry, leather crafting, weaving and pottery. We run tests on different types of weaponry and we study their use during fights. We are trying to reconstruct the societal burial rituals, as accurately as possible, on the basis of the historical and archaeological sources. The project is complemented by an attempt to

reconstruct the nutritional management of the Przeworsk culture and, as a result, reproduce the 'Barbarian' cuisine.

Cooperation with Museums and Educational Institutions

By cooperation with museums and educational institutions we are trying to reach wider audiences. For many years we have been cooperating with Świętokrzyskie Stowarzyszenie Dziedzictwa Przemysłowego (The Świętokrzyskie Association of Industrial Heritage), that organizes archaeological events a few times a year, concentrated on popularising knowledge about antiquity on the terrain of today's Poland.

An annual festival, Iron Roots, takes place in the grounds belonging to the Muzeum Przyrody i Techniki *Ekomuzeum* im. Jana Pazdura (Museum of Nature and Technology *Ecomuseum*) in Starachowice which is addressed to children and youngsters. This event is organized and patronized by The Świętokrzyskie Association of Industrial Heritage. During this event, the Society of Experimental Archaeology *Harjis* gives educational lectures.

Another festival which has been taking place in Poland for 50 years, and for almost 20 of those years has been organized by SŚDP (The Świętokrzyskie Association of Industrial Heritage), is the *Dymarki Świętokrzyskie* (*The Świętokrzyskie Bloomery*). It was the biggest historical event in Poland which concentrated on ancient times, combining re-enactment with experimental archaeology and also brought together archaeologists from the entire country and abroad. This idea is now being continued as a new project Iron Cradle, which was started in 2018 in Nietulisko Fabryczne.

A successful open-air festival that has taken place annually for the last 15 years is *Archaeological Feast in Masłomęcz*. It is organized on the site of the open-air museum *The Goth's Village in Masłomęcz* built on the terrain of the archaeological site of the Wielbark culture, another Iron Age culture who was also located in the area of today's Poland.

The *People of Fire* festival organized by The City Arsenal, a branch of the City Museum of Wrocław, differs from the previously mentioned events because of its location in the centre of the city. In this case, organizers have given most attention to the handicraft presentations connected to fire.

During these events, our society organizing projects that bring realities of everyday life closer to the visitors. In order to reach out to tourists we used methods such as lectures, presentations of dress and weaponry at the turn of the eras, including changes in weaponry, along with reconstructions of archaeological artefacts showing changes in the decorative styles and ornamentation. By the contact with our replicas we can show people how used to look artefacts from 2000 years ago.

Research Projects

Research projects undertaken by *Harjis* concern a wide spectrum of daily life in the antiquity. In order to professionally work out the reconstruction of dress in the Przeworsk culture we have analyzed finds from the most important archaeological sites of this culture (eg. Oblin, Ciebłowice Duże, Nadkole, Siemiechów, etc.). We have also reached out for analogies from neighboring culture circles. Carefully chosen methods have brought us measurable effects in organic and non-organic elements that give us a realistic picture of the people living in the European (North-East) Barbaricum.

We also carry out experiments on metalworking. Their main objective is to reconstruct iron items by the same means that were used in the ancient times. We have made a considerable amount of copies of artefacts, which has helped us to get to know the technology they were made with. As a result of these experiments we had gained confirmation that the specialist tools were used to produce specific effects on items. One of the most interesting examples has been the reconstruction of the Type Almgren 41 fibula, variation b (Olędzki, 1992, pp.49-68) made exclusively with historical tools and techniques (Rutkowski, in press).

Another intriguing problem was the usage of those metal objects and protecting them against corrosion. We ran tests which included different ways of heat impregnation: with animal fat, bees wax or cow's horn. We have tried the best method in practice. A spearhead blackened with a cow's horn was exposed to atmospheric conditions, illustrating that the wet environment in which it was kept made no impression on the protected spearhead (Badowska and Rutkowski, 2018, pp.5-12).

We have also become interested in pottery (Badowska and Rutkowski, 2018, pp.5-12). We have begun with the preparation of the ceramic mass (clay) by adding different admixtures – organic (e.g. dried and chopped grass) and non-organic (e.g. sand, gravel, ground shells and crushed stone).

We have formed clay vessels with the methods used in ancient times such as the coiling technique, forming small rolls and then sticking them together to the bottom, evening them and smoothing over the edges. As a final touch, these formed vessels are suitably decorated. The methods that we have used have been strictly limited to those used in the Przeworsk culture. The most characteristic methods are: polishing the surface, curving ornaments in the form of lines, plastic bands or other decorative forms. The next thing to do was to dry prepared wares. The admixture had a great impact at this stage of production. Added in suitable amounts, the admixture helped to limit the shrinkage of clay.

The final stage of experimentation was to fire dried vessels. We have done firing in a reconstructed pottery kiln from the Roman influence period and also in an open fireplace (pit

firing). We expected results in a form of blackened (reducted) vessels of the Przeworsk culture.

The first pit firing took about 6 hours, and at the end of the firing we buried vessels with small and fresh birch branches, leaves and then covering all of this with dirt. “Black reduction” showed up only on a few of fired vessels. Most of the ceramics became grey. We decided to lengthen the duration of firing by about 2 hours, and at the end, added some tarry wood such as pine or spruce. In addition, we placed smaller pots inside the bigger storage vessels. As a result, the small pots inside the bigger ones turned black and those that were left outside turned dark grey. The subsequent firings were carried out in a kiln, with the first taking about 8-9 hours. At the end we added some pine wood and closed the kiln. When the kiln cooled down and we opened it, we observed a small crack in the wall of the dome[1] .

An attempt to reconstruct the diet of the Przeworsk culture was an interesting challenge. To carry out this project we needed to gather knowledge from the field of archaeobotany - such as species of edible plants found in antiquity in the territory of present-day Poland - and archaeozoology (Wasylikowa, 1999; Rodzińska-Nowak, 2012), for species of animals that could supplement the regional diet. It was necessary to prepare an appropriate set of kitchen utensils to reconstruct the entire procedure of preparing a cooked meal, that is cutting, preparing the dough, cooking and baking. We also had to pay attention to the form in which the dishes could have been served and what could have been prepared with ancient equipment. A few pieces of information we have found in written sources such as the Germania (Tacitus, pp.5, 15, 23, 45) and *The Gallic War* by Julius Caesar. As a result, we have created dishes such as a rabbit stew cooked on a rye leavened flatbread with wild fruit jam and a sweet drink made of cooked barley malt. Our project also allowed us to demonstrate to a wider audience, in a series of workshops, what the diet of the ancient Barbarians might have looked and tasted like.

Popularisation of Experimental Archaeology

Experimental archaeology often goes hand in hand with popularisation. In Poland there are no lessons about prehistory at any level of education, or if there are any extracurricular lessons, they are limited to ancient Greece and Rome. That is why it is so important to show people that this region of Europe also has its own interesting place in history. We have taken some actions in order to bring local ancient history to young people.

One of the projects carried out by *Harjis* in cooperation with the Students Research Circle of Prehistoric Archaeology of the University of Lodz, and the Department of Prehistory in the University of Lodz, was a series of workshops on making prehistoric ceramics. During these workshops, participants could learn how to prepare clay, make vessels and decorate them. Each participant had to prepare the ceramic mass by adding sand or gravel and then

proceeded with the coiling technique to form their vessels. The entire cycle was crowned by a pit firing of ceramics.

In order to reach wider audience, the internet is an extremely helpful tool. The website of our association is our showcase, which is essential for our activity to be noticed. To promote our activities we also use other popular social networks such as Facebook and Instagram.

In order to attract the interest of other internet users in experimental archaeology, we regularly publish posts on various topics – it can be a reconstruction of an artefact, a report from our journeys or an account of fresh experiments. Sometimes we try to encourage people who follow our profile to get a deeper interest in history by announcing ancient history contests. Humorous posts are well received, thematically referring to subculture motifs or ancient history.

To make the image of our website more attractive, we have started cooperation with the graphic company *Łódź Graficzna*. Thanks to this cooperation a series of colouring books was created - educational materials for children that illustrate the appearance of 'Barbarians' of first centuries AD Poland.

We are also presenting lectures on popular history and archaeology in museums and at universities, especially in our *Alma Mater* – the University of Lodz. During our lectures, we introduce listeners to the subject of everyday life in antiquity, but also frame archeology as a useful science and what our experiments are based on. For students of archaeology, we conducted a series of thematic classes on dress, ornamentation and metallurgy in 'Barbarian' Europe. We have also visited several primary and secondary schools, allowing children and youngsters to directly experience a little bit of living history. We have also given some shows during charity events, for example, for hospices.

To engage the youngest children's imaginations, we have conducted workshops on battle formations, during which the children were tasked with performing military commands, moving in a battle formation, and finally attacking arranged moving targets.

Scientific Activity

In addition to this promotion of subject, we place special emphasis on scientific activity. We try to publish the results of our experiments regularly in peer reviewed scientific journals. We have also carried out statistical surveys in the field of ethno-archaeology. The topic was of course experimental archaeology. We asked a group of Polish craftspeople, who deal with reconstructions, a set of questions about the difficulties they encounter during their reproduction work. What is the biggest problem? Where do the artisans derive information about the ancient technology from? How are their products received by recipients? These are just some of the questions that respondents were asked. We selected 27 artisans

representing different crafts (blacksmithing, herbal medicine, carpentry, bronze casting, pottery, iron smelting, spinning and weaving, shoemaking and leathercraft), and with their informed help, have come to some interesting conclusions. Here are some of them. The lack of accurate archaeological documentation and limited access to artefacts make it difficult to create a proper reconstruction. The older generation of archaeologists are often resistant to the idea of reconstruction, while the younger generation is open to public engagement by using and reconstructing artefacts. More and more archaeologists professionally make reconstructions of artefacts themselves, which increases the quality of products[2] .

Future Directions and Plans

We have briefly presented our activities here, but we have much planned for the future. We are planning to extend our internet activities to popular social media networks like Twitter and/or Tumblr, and to set up a channel on YouTube.

We also intend to increase the regularity of our lectures at schools, where the knowledge of antiquity is very limited (as we have mentioned before, the curriculum in schools does not include antiquity in Poland).

And finally, we intend to continue the realisation of our already scheduled experiments.

1 The survey and its results were presented on a poster during the EXARC conference in Kernave, Lithuania, on September 13-15th 2018.

2 The whole survey and its results were presented on the EXARC conference during the Paleofestival at La Spezia, Italy, on May 27th 2018 and will be published in the conference publication.

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experimental archaeology

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FIG 1. BLACKSMITHING WORKSHOP. PHOTO BY K. BADOWSKA

FIG 2. PIT FIRING OF THE CERAMIC. PHOTO BY K. BADOWSKA

FIG 3. BARBARIAN CUISINE WORKSHOP. PHOTO BY W. RUTKOWSKI

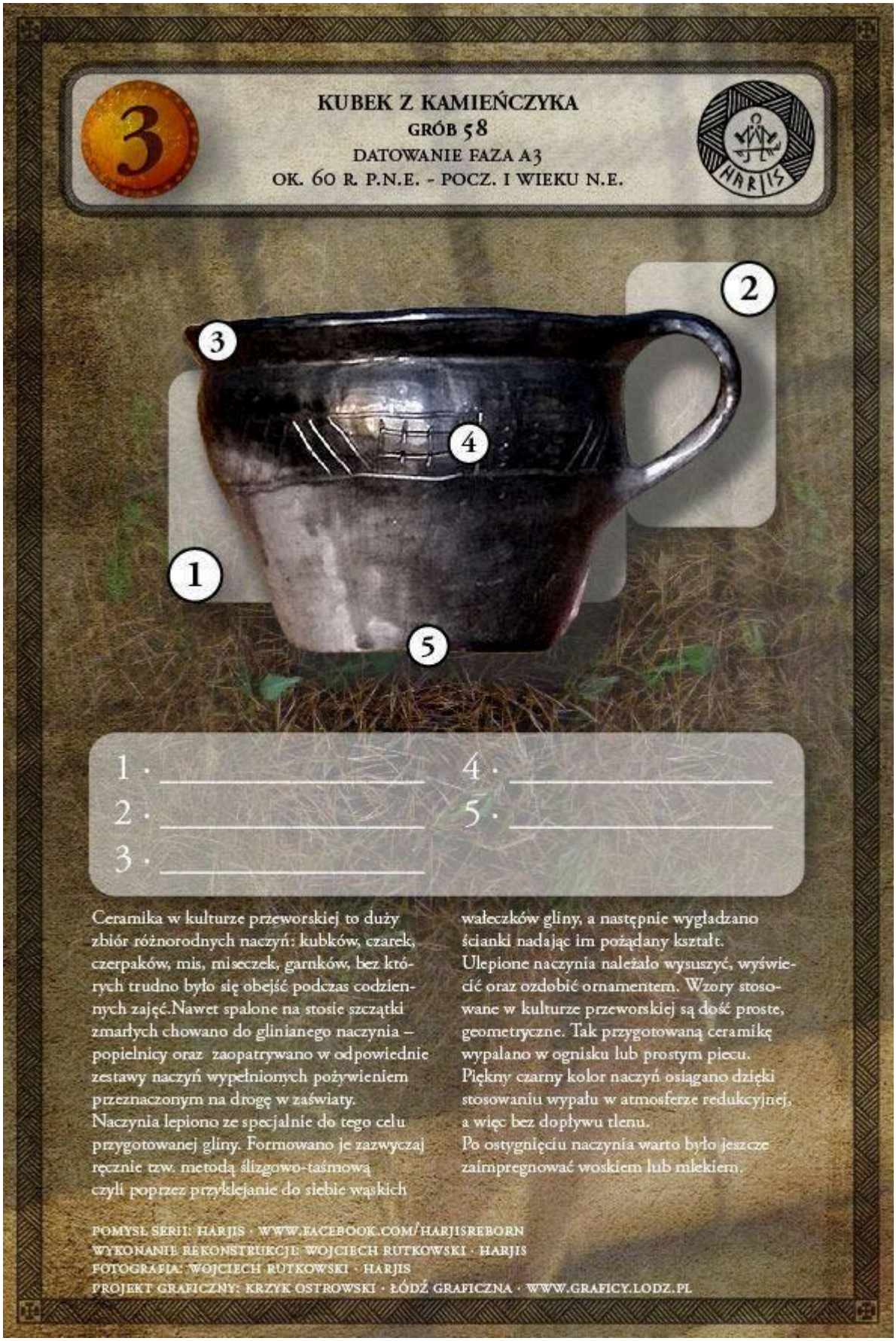

FIG 4. CARD FROM THE CONTEST ABOUT ARCHAEOLOGY ON FACEBOOK. PHOTO BY ŁÓDŹ GRAFICZNA

FIG 5. COLOURING BOOK FOR CHILDREN PREPARED BY “HARJIS” AND “ŁÓDŹ GRAFICZNA”. PHOTO BY ŁÓDŹ GRAFICZNA