

JEXARC JOURNAL 2015 Digest

Issue 2

EXARC is the ICOM Affiliated Organisation representing archaeological open-air museums, experimental archaeology, ancient technology and interpretation

OPEN
ARCH

From Celtic Village to Iron Age Farmstead

Daily Life and Feasting in the Neolithic

Mural Painting of a Roman Lady from Viminacium

The Steinzeitpark Dithmarschen

Montale, the Terramara Lives

Tangible and Intangible Knowledge

Terra Ibèrica Festival in Calafell

Kierikki Stone Age Centre

What Does Your Visitor Experience?

Looking Back

OPEN ARCH

2011-2015

www.OpenArch.eu

The second, large EU cooperation project operating within EXARC. OpenArch, is coming to a close. A previous project, liveARCH, in which eight partners from eight different countries joined together for a three-year cooperation project under Culture 2000, was a very good experience, and for some it was the first time participating in an international project of this size. From this project we still use, among other publications, the guidebook to archaeological open-air museums in Europe and a good video explaining what kind of museums are and do.

At the end of liveARCH, in 2009, EXARC found it important to continue this collaboration between EXARC members. The result was OpenArch, which brought together 11 partners and was funded by the Culture Project of the European Commission.

Yes, we lost a few friends along the way due to changes in jobs, et cetera, but we gained some new ones too, and made it alive and well to the finish line. It is amazing to see how much of what we planned five, six, or even seven years ago came to fruition. The obvious results are the many workshops and conferences, with attendants from all corners of Europe. We had the chance, thanks to the European Commission, to stand back from our daily chores and discuss in depth any subjects that touch upon us all, such as the dialogue with visitors. And we were lucky enough to invite specialists to help us that bit further in all we needed to become more professional.

Thanks to OpenArch, the partners were able to produce conference proceedings, some very useful handbooks (public relations as well as live interpretation), and some films about experiments and crafts in archaeological open-air museums. The websites www.openarch.eu and www.openarchaeology.info were made with generous help from OpenArch. Most of, if not all of, this material is available for other EXARC members and, where possible, for the wide world. We are happy that the material is not merely meant for archaeological open-air museums, but is also interesting to our individual members, who are often museum professionals. They are all pieces of a toolkit for becoming more professional.

Thanks to our social media efforts, the word about our work has spread. In addition to the work and ideas of the OpenArch partners, we gladly 'advertised' EXARC member's ideas on Facebook, Twitter or LinkedIn whenever they fitted with the aims of the project. The aforementioned films are shared on Vimeo and have received thousands of viewers, the same happened to the PowerPoints from OpenArch conferences: the more you share, the more you receive positive feedback and ideas for the future.

As this special issue of the EXARC Digest is underway, we still see several new products from OpenArch popping up. The project has definitely delivered enough output for EXARC members, and several partners of the OpenArch project are looking into further cooperation, mostly in new groups with other EXARC members. We do not know yet what the outcome of that will be: some current ideas focus on visitors with special needs, volunteers or an international road show teaching museums about social media. You tell us!

OpenArch taught us to not be afraid of long-term international cooperation. We see the local in the European and the European in the local. I wish you happy reading, and please contact EXARC if you are interested in cooperation with other members.

Roeland Paardekooper
EXARC Director



Fig 1. OpenArch conference at Viminacium, September 2014

EDITORIAL

As we said in the preface of our spring Digest, the autumn issue of 2015 is dedicated to the European OpenArch Project, on which more information can be found further in. In this project 11 partners joined forces to exchange information and learn from each other. Here we present contributions dedicated to some of the various attributes related to the work of Archaeological Open-Air Museums.

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Linda Hurcombe from Exeter University in her article *Tangible and intangible Knowledge: the unique Contribution of Archaeological Open Air Museums* discusses the unique dilemma of AOAMs: “Archaeologists and traditional museums thus present the tangible hard evidence as their primary concern with a layer of interpretation that is readily identified. In direct contrast, the AOAMs present a great deal of the intangible and interpretative material resting on a base of factual evidence which may not be present on site.” She then shows the steps taken to create the interpretations AOAMs share with the public. We can follow practical application of this in Steve Burrow’s *From Celtic Village to Iron Age farmstead: lessons learnt from twenty years of building, maintaining and presenting Iron Age roundhouses at St Fagans National History Museum* introducing the steps taken in constructing an Iron Age farmstead, based on Bryn Eryr, Anglesey at St Fagans. Other aspect of presenting the past to the wider public is portrayed in the article *What Does Your Visitor Experience? Making the Most of Live Interpretation in a Unique Setting* by Mark van Hasselt. What are the merits of Live Interpretation? Is it an effective method? How does it involve the visitor?

Another set of articles deals with the development of a working AOAM and its displays. The Steinzeitpark Dithmarschen in Albersdorf (*The Steinzeitpark Dithmarschen (DE): Concept and Development of a Visitor Oriented Educational Centre for Sustainable Development*), in the county of Dithmarschen (Schleswig-Holstein, Germany), is an archaeological open-air museum that integrates the surrounding landscape. It aims to teach the public about the relationship between the natural environment and the development of the land.

The Terramara Park of Montale celebrated in April 2014 its tenth birthday (*Montale, the Terramara Lives*). The realization of the Park was the result of a long season of scientific research that still continues. It is dedicated to the enhancement of the terramare culture, defined by characteristic villages of the Po River plain area dating to the Bronze Age. Finally, *Mural Painting of a Roman Lady from Viminacium: From Roman Matron to the Modern Icon* introduces us to the display of ‘Viminacium Mona Lisa’, copy of a fresco from Pagan tomb G-2624, discovered in 1983 at Pećine.

Like the OpenArch project, which is coming to its end, EXARC is the platform for the exchange of experience in all aspects of running AOAMs. Whether it is interpretation, experimenting or management issues, the EXARC Journal will continue to serve to this purpose.



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CONTENTS

20 What Does Your Visitor Experience? Making the Most of Live Interpretation in a Unique Setting



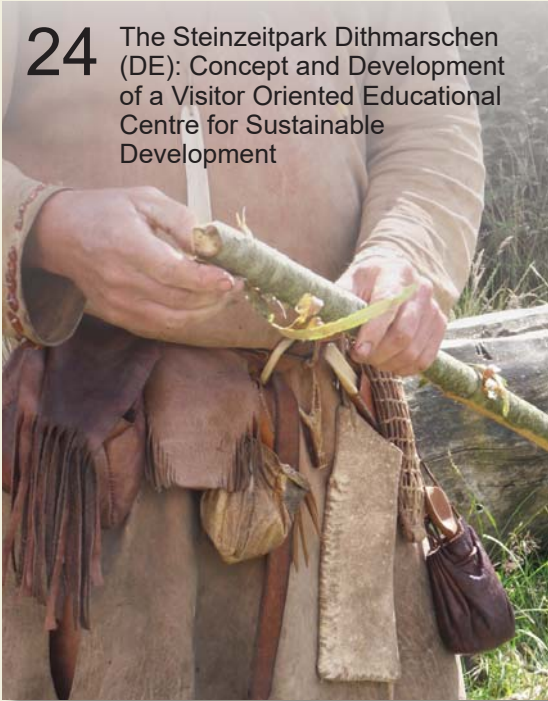
6 From Celtic Village to Iron Age Farmstead: Lessons Learnt from Twenty Years of Building, Maintaining and Presenting Iron Age Roundhouses at St Fagans National History Museum



34 Tangible and Intangible Knowledge: the Unique Contribution of Archaeological Open-Air Museums

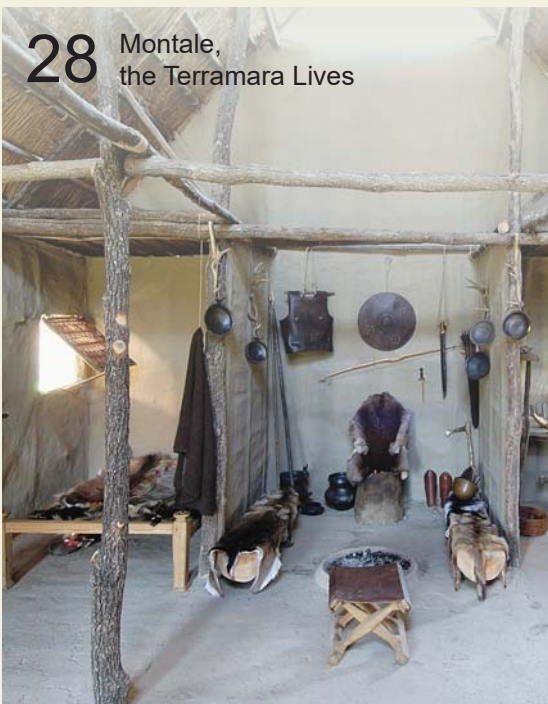


24 The Steinzeitpark Dithmarschen (DE): Concept and Development of a Visitor Oriented Educational Centre for Sustainable Development



31 Mural Painting of a Roman Lady from Viminacium from Roman Matron to the Modern Icon

28 Montale, the Terramara Lives



Peer-Reviewed Articles

ARCHAEOLOGICAL OPEN-AIR MUSEUMS

6 From Celtic Village to Iron Age Farmstead: Lessons Learnt from Twenty Years of Building, Maintaining and Presenting Iron Age Roundhouses at St Fagans National History Museum | Steve Burrow (WAL)

24 The Steinzeitpark Dithmarschen (DE): Concept and Development of a Visitor Oriented Educational Centre for Sustainable Development | Rüdiger Kelm (DE)

28 Montale, the Terramara Lives | Andrea Cardarelli, Ilaria Pulini and Cristiana Zanasi (IT)

34 Tangible and Intangible Knowledge: the Unique Contribution of Archaeological Open-Air Museums | Linda Hurcombe (UK)

INTERPRETATION

20 What Does Your Visitor Experience? Making the Most of Live Interpretation in a Unique Setting | Marc van Hasselt (NL)

31 Mural Painting of a Roman Lady from Viminacium from Roman Matron to the Modern Icon | Jelena Anđelković Grašar and Milica Tapavički-Ilić (RS)

Mixed Matters

12 Daily Life and Feasting in the Neolithic | Tosca Friedrich, Birte Meller and Rüdiger Kelm (DE)

17 Looking Back | Björn M. Buttler Jakobsen (SE)

14 Terra Ibèrica Festival in Calafell: a Backward Glance Through the Years (2010-2015) | Manel Gómez Gutiérrez (CAT)

37 Kierikki Stone Age Centre - The Advantages of Being an OpenArch Funded Project | Leena Lehtinen (FI)

16 Book Review: Archaeology and Crafts: Experiences and Experiments on Traditional Skills and Handicrafts in Archaeological Open Air Museums | Doug Meyer (US)



In February 2013 St Fagans National History Museum closed its Celtic Village after over twenty years. It was built for the museum by Peter Reynolds of Butser fame. The three houses that made up the Village were based on excavated evidence from Moel y Gaer in northeast Wales (Guilbert 1976; 1982), Moel y Gerddi in northwest Wales (Kelly 1988) and Conderton in the English Borders (Thomas 2005). This article reflects on what we learnt from this experience and outlines our plans for the redevelopment of the Iron Age roundhouses at St Fagans (See Figure 1).

From Celtic Village to Iron Age Farmstead: Lessons Learnt from Twenty Years of Building, Maintaining and Presenting Iron Age Roundhouses at St Fagans National History Museum

| Steve Burrow (WAL)

Fig 1. (Top) The Celtic Village in 2004, showing the Moel y Gerddi house in the background.

Fig 2. (Right) Sample: Thermal images were recorded at regular intervals before and after the lighting of a fire in Moel y Gerddi in 2013.

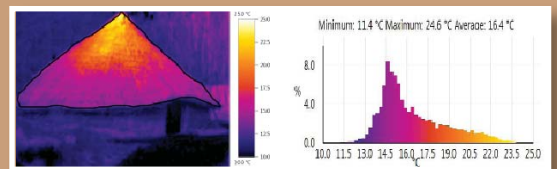
Lessons from the Celtic Village

Lessons from the Celtic Village: water run-off and ventilation

One of the dominant themes that runs through the maintenance records for the old Village is a result of its location, at the base of a hill. The site was plagued by water run-off resulting in very damp conditions. Several attempts had been made to mitigate these problems. For example, the ditch of the palisade was intended to catch the run-off from the hill with drainage pipes beneath the houses carrying water away but, over time, the ditch filled-in and the pipes clogged.

The choice of hillside location had one additional consequence. In order to produce flat ground, Peter Reynolds cut a level platform into the hillside. Over the years the vertical edge eroded and soil washed down. Attempts were made to cut back the hill wash in the early years but, over the course of its life span, the extent of the original platform was forgotten and efforts ceased (See Figure 3 and 5).

The shading of the site by trees further exacerbated the problem of damp since the thatch didn't dry out, causing it to rot fast and leading to increased maintenance costs. The lighting of fires within the house helped to dry the thatch a little, but the fires were allowed to die back when the museum was closed (See Figure 2).



Lessons from the Celtic Village: disabled access and light levels

The location brought another set of difficulties, this time for visitors. Access to the site was along a steep and uneven path which was an obstacle to wheelchair users. Furthermore, the entrance to the Moel y Gerddi house involved stepping over a low-wooden sill. Once inside light levels were very low which made it hard to navigate the house (See Figure 4).

Disabled access issues are not unique and can be found at many open-air museums. But, the approach to such issues has changed since the Village was first built. There is now far greater awareness of the needs to provide equality of access – for example, the UK's Equality Act 2010 protects people from discrimination in the workplace and wider society. An access assessment undertaken at St Fagans in 2011 highlighted the extent of the problems for disabled visitors to the Celtic Village and made it an imperative to resolve as many as possible.

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**Lessons from the Celtic Village:
coping with success**

Perhaps the greatest single factor affecting the visitor experience in the Celtic Village was simply the sheer success of the structures. On a peak summer day it was possible for 6-7,000 people to visit the Village. This placed great demands on the individual buildings, as both Moel y Gaer and Conderton only had single low doors and maximum occupancy levels of 12 people each, while Moel y Gerddi had two opposing doorways and was rated for 35 people. On a busy day, the doorways were often log-jammed with visitors.



Fig 3. (Above) Still image taken from a video recorded when Peter Reynolds built the Celtic Village in 1992. The platform onto which the Moel y Gerddi house was built can be seen along with the cut into the hillside, the latter being visible in the lower right hand corner.

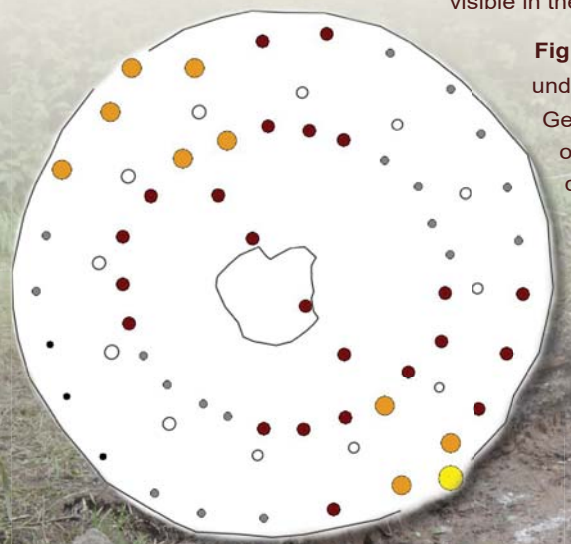


Fig 4. (Left) Lux level survey undertaken inside the Moel y Gerddi house in 2012. (Wall of house delineated with a dark line, hearth shown in centre, hollow circles indicate timber roof supports. Larger yellow dots indicate areas with higher light levels, small black dots indicate lower levels).

Beyond the Celtic Village

The closure of the Celtic Village provided an important opportunity to reflect on these varied issues. Fortunately, at the same time as the decision to close, came the decision to build a new Iron Age experience. At the time of writing we are about half way through and so what follows is an overview of a work-in-progress.

**Beyond the Celtic Village:
location**

In developing our plans for the new buildings the first issue we addressed was their location, taking the opportunity to build on a new site at the top of a hill.

**Beyond the Celtic Village:
the basis of the reconstruction**

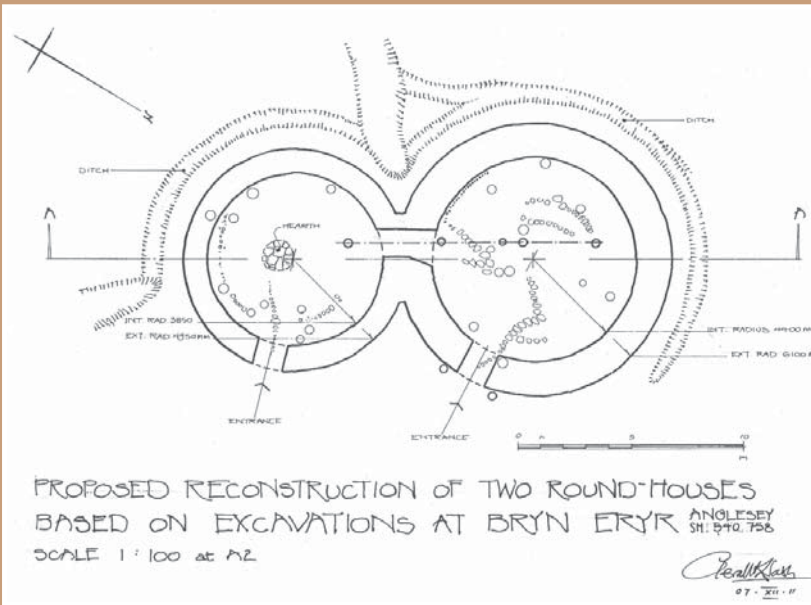
The second issue we faced was what we should build. There are now over 120 roundhouses in Britain and Ireland, the majority of these are based on the work of Peter Reynolds who provided an architectural template for wattle-walled roundhouses and also explored the design of stone-walled roundhouses. But in recent years there has been a growing recognition that in western Britain roundhouses were often built with thick earth walls (see Bryn Eryr, Anglesey, Longley 1998; Cefn Du, Anglesey, Cuttler et al. 2012; Poldowrian, Cornwall, Smith and Harris 1982).

It was decided therefore to base our reconstruction on evidence from Bryn Eryr, an Iron Age farmstead on Anglesey. In its second phase, Bryn Eryr consisted of two clay-walled roundhouses built abutting one another. Each house had a doorway opening to the east, looking out onto a cobbled yard, while behind were drainage ditches and clay quarry pits (See Figure 6)

A number of different design possibilities exist for clay-walled roundhouses, with the wall height being a crucial variable. If roundhouses were built with pure clay then the walls must have been low, but the strength of clay can be increased by mixing it with coarse aggregates, to create a building material known in Wales as clom. This material can be very strong, allowing walls of around 0.6m thick to be raised to over 2.4 m tall, as evidenced by the clom-built Nantwallter house at St Fagans (See Figure 7).

No detailed description of the composition of the material used to make the walls at Bryn Eryr could be found in the excavation archive. Nonetheless, the archive makes clear that the area is rich in clays and well-supplied with coarse and fine aggregates. It was therefore decided to build with walls around 1.5 m high (See Figure 8).

Fig 5. (Background) Photograph taken during the 2013 excavation of the Moel y Gerddi house. The white line marks the lime coating on the inner-face of the house wall, stakeholes show the centreline of the wall.



The method by which two prehistoric houses could be built abutting one another was particularly vexing, although it is known from other sites such as Tre'r Ceiri, a hillfort in Gwynedd, north Wales and Chysauster in Cornwall. Often reconstruction drawings of such structures show the roofs as separate cones (for example People's Collection Wales 2010 and Cunliffe 1995, pl 6). Such a design would lead to water penetration into the walls. To reduce the risk we decided to join our two roundhouse roof cones using a linking ridge. One consequence of this design is that a disproportionate amount of water would be funnelled from the roofs where the two houses join. Referring back to the archaeological evidence, a large drainage gully had been dug behind the buildings, helping to carry water away from the houses.

**Beyond the Celtic Village:
accessibility and light levels**

Fire safety makes it necessary to include more than one exit in large buildings, regardless of their presence in the original. In the case of our new roundhouses, it was decided to include a doorway linking the two buildings making it possible for visitors to enter via one house and leave from the second one. This will reduce congestion at each doorway, improve visitor flow, and make it easier for staff to supervise both structures.

Fig 6. (Left Top) Ground plan of the Iron Age farmstead as used during the building work.

Fig 7. (Left Middle) The Nantwallter cottage at St Fagans. This building has been open on the site for over twenty years and remains in excellent condition

Fig 8. (Bottom) Reconstruction drawing produced at the start of work on the Iron Age farmstead. The details of the roof design have changed since this was produced.





The issue of disabled access into the roundhouses is helped by the evidence from the original site. The doorways of the original houses were wide and there is no evidence for sill beams.

Lighting has been a particular concern. In 2012 a scale model of the Iron Age farmstead was produced and tested within the Cardiff School of Architecture's Artificial Sky Facility. The conclusion leads us to believe that the light levels inside the houses will be very low (See Figure 9).

Many options were considered for increasing the light level including windows in the wall and several of these were tested. All were felt to be intrusive and they suggested more than the evidence could support. In the end the houses will be equipped with concealed electric lighting. The facilitator will have the option to adjust the light levels according to the needs of visitors.

Beyond the Celtic Village: experiment or experience?

So far, this article has focused on the practical issues affecting the development of the Iron Age farmstead, not least because this is an area that is little explored. Indeed, the practicalities involved in catering for visitors are sometimes presented as a negative (Harding 2009). I hope therefore that the discussion above has helped to illustrate why such compromises are made.

But these compromises raise the question of what we are reconstructing. Is it Bryn Eryr itself? Clearly not. In an ideal world we would present our roundhouses as an "Iron Age farmstead, based on Bryn Eryr, Anglesey". However almost all of the buildings in the museum are known by a site name and it was felt that to deviate from this pattern would be to devalue the work of those involved. For this reason, our Iron Age roundhouses are known as "Bryn Eryr".



Fig 9. (Above) Testing the light levels that could be expected inside the Iron Age farmstead inside the artificial sky facility at Cardiff School of Architecture, 2012.

Fig 10. (Above) The 1940s reaper-binder harvesting the spelt crop in July 2014.

Fig 11. (Right) Threshing machine used to remove the heads from the wheat, having explored other threshing methods.





A further question exists as to how much these structures can be regarded as experimental. The new Iron Age farmstead is decisively an educational resource. The roundhouses explore themes not previously addressed on a large scale—such as clay-walled building—but they have not been designed explicitly as an experiment. Instead, we hope that they will become a venue for experiments.

The success of the Iron Age farmstead as a teaching resource will depend on the richness of the narrative generated around each aspect of the site.

Beyond the Celtic Village: thatching the roofs

We wanted the thatching material and method to be a key part of the interpretation. Looking at the original evidence from Bryn Eryr it is clear that the owners grew, or had access to, spelt. Working with the advice of John Letts, an expert in historic thatch, we decided to use spelt, which we grew on farmland at St Fagans.

Modern machinery meant that ploughing the field and planting the crop was a quick operation - harvest was a different matter. With insufficient labour available to harvest by hand we used an early-20th century reaper-binder (See Figure 10)

Teams of people followed the reaper-binder, collecting the bound sheaves and setting them upright to dry. A range of threshing methods were tried in order to remove the grain from the straw. In the end we used an early-20th century threshing machine (See Figure 11).

Fig 12. (Top) The thatching of the roofs of the Iron Age farmstead. The shaggy appearance of the roofs is a product of the stuff thatching technique used throughout.

Fig 13. (Middle) Replica of an Iron Age cauldron found just 25 km from Bryn Eryr. Work on this item has been carried out by Hector Cole,

Fig 14. (Next page Top) Turned and carved bowls. Work on replicating Iron Age wooden bowls has been carried out by the wood turner Robin Wood, Artisan of the Year 2009.

Fig 15. (Next page Bottom) Iron woodworking tools. The blacksmith at St Fagans, Andrew Murphy, has worked with conservation and curatorial staff from National Museum Cardiff to produce exacting replicas of a wide range of iron woodworking tools based on examples from Iron Age and early Roman sites principally in north Wales.



The conclusion for those of us who were involved was that many narratives of Iron Age life have underestimated the workload and significance of the harvest in the annual rhythm.

Thatching is still in progress with John Letts recommending stuff thatching. Using this technique the roof is built up from a base coat, in our case of heather and gorse, with the spelt then being stuffed into this base. Patching the roof should be easier because sections of the stuff thatch can be replaced as needed (See Figure 12).

**Beyond the Celtic Village:
fitting out the interior**

Throughout its active life, the Iron Age farmstead will have to serve two distinct audiences: the school groups and the general public. Therefore, the smaller roundhouse will be presented as a model of Iron Age life, illustrating the range of activities that are likely to have occurred, while the larger roundhouse will serve as a classroom. We have invested in replicas based on specific archaeological objects in order to ensure as high a quality of experience for our public and schools (See Figure 13, 14 and 15).

Conclusion

Although the formal opening of the farmstead is still some way off, for many the visitor experience has already begun. Throughout the construction of the site we have drawn on the help of a large number of volunteers. Groups have lent a hand in the harvest of the spelt, the building of the walls, preparing timbers, and thatching the roof. As a result, there is a considerable sense of shared ownership about the project.

About Author

Steve Burrow is Head of Historic Properties at St Fagans National History Museum.

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Daily Life and Feasting in the Neolithic

| Tosca Friedrich, Birte Meller and Rüdiger Kelm (DE)

During summer 2014 over 30 archaeology students from the University of Hamburg, as well as four children, participated in a practical week of experimental archaeology at the Steinzeitdorf Albersdorf.

In preparation for this week, the students attended a seminar at the University of Hamburg. They were introduced to the basic theories and skills involved in experimental archaeology as well as museum didactics.

At the beginning of the seminar the students chose one of different task groups, according their interest. The aim of the various groups was to formulate either a museum and heritage related didactic program or a practical experiment on the given topic. The archaeological contexts, approaches and goals of each group were presented to the other students.

The performances and experiments were presented during the designated week in Albersdorf. To be visible to the visitors, all members of the practical week—students and teachers—were dressed in linen, wooden or leather wear. The patterns were taken from Neolithic and Bronze Age figures and illustrations, as well as from burial finds from Central European contexts.

As in previous years, there were many visitors; a considerable amount of them came from further away specifically to visit the practical 'student week'. Because of the higher frequency of visitors on Saturday and Sunday, the stay included a complete weekend. During the week, participants offered information to the public about the OpenArch Project and communicated their experiences in their respective groups.

Every year the week has a special theme. In 2014 the topic was "Daily Life and Feasts". Not every group was able to transfer this into their projects. For example, some of the students mainly repaired broken objects or conserved things for future use. Utilising archaeological evidence was essential for all groups and topics.

The students formed collaborative groups centred on the different raw materials available in Neolithic times (See Table).

It can be concluded that the entire group of students, project attendants, supervisors and of course the museum staff had a great experiences and an immense sense of achievement during the practical week. The continual sunny, hot weather added to that sentiment. As was the case in the earlier years, some projects will be continued.

- **Stone/Flint.** The students were already introduced to the skill necessary to perform flint knapping in the previous year, so they produced not only flakes, scrapers and borers which were used by other groups, but focused on the various ways of manufacturing axes and looked at mounting of tools.
- **Bone/Antler and jewellery.** This group focused on learning the basic skills. After introduction small objects were produced. Drilling and punching holes, then investigating their shapes was one the goals of the group, which was also in charge of decorating clothing based on archaeological evidence, as well as investigating the practicality of wearing it on a daily basis. Clothing sometimes looked good, but was unsuitable for work, so it was hypothesized that some of the clothing and decoration found in various archaeological contexts would have been occasional wear.
- **Clay/Pottery.** This group was further divided into two distinct themes. On one hand, the manufacturing of vessels for daily use within the village was important. On the other hand, the theme of the week was producing special pottery associated with feasting at a burial site. The decoration application was an experiment done by one of the participants.
- **Wood, bark and bast fibre.** Two ongoing projects focussed on this material. Like the years before, containers, buckets and boxes were produced using different materials. The other project looked at the chaîne opératoire of vessels made of bur-bearing plants, known from various Neolithic sites in the Alpine regions.
- **Textile.** One student group concentrated on dyeing linen and wool by using plants collected in the surrounding area. The other group focused on weaving, varying the way fibres, threads and material were produced.
- **Food.** This group is vitally important every year, but more so for an overall theme of daily life and feasting. They prepared lunch for the whole group using only seasonal and archaeologically verified food. Everyday various dishes were presented, cooked and grilled on a fire, but due to the group size the main pot used was a metal one. Previous experiments used reconstructed ceramic pots, but these did not survive the daily routine or the cold winters in the house.
- **Brewery.** One experiment followed the process of brewing beer. Various plant and herb combinations were tried, given that they would be available in the Neolithic, as demonstrated within pollen records. The group—and also the audience—were free to leave their taste impressions for research. The pottery and brewing groups also worked together to find pottery useful for the different processes of brewing.
- **Music.** This group tried to manufacture all kinds of musical instruments presumed at the Stone Age times in various ways and using different materials. The flutes and various percussion instruments were tested for use and sound.
- **Sweat Lodge.** On the basis of ethnological and archaeological evidence the group attempted building a sweating hut. The research and gathering of materials lay in the hands of one student, but the building involved all participants in their spare time. Except for birch bark, all building materials were gathered in the surrounding area of the village. The construction was more or less finished by the end of the week. The remaining finishing touches were put in place by the museums staff.
- **Oven re-reconstruction.** The outdoor oven, which had already been rebuilt twice, had to be reconstructed again. Because the remaining parts of the oven were in such bad shape, a new one was built next to the old one. The reuse of material was one of the questions of the group.
- **Leather.** Two deer hides were scraped using different lithic tools like those found within Neolithic habitation sites. Bone scrapers, like those used by the indigenous inhabitants of North America, were also used. It was considered such tools may be found in archaeological contexts, but perhaps not recognised due to resembling waste. The hides were preserved in salt to use next year for ongoing tanning experiments.
- **Boat.** The group returned after a two-year hiatus, trying new construction methods and use of smoke for conserving the external leather skin of the boat. The sequence of construction improved considerably, and the boat was fully useable.

Celebrating the Tenth Anniversary of Experience in Experimental Archaeology at the Steinzeitdorf Albersdorf

| Photos by Felicitas Faasch, Alina Friedrich and Birte Meller (DE)



Fig 1. Working all together building the sweat house.



Fig 2. Getting the cow skin attached to the boat construction.



Fig 3. Cooking Food for the whole group at the fireplace.



Fig 4. Evening dawn at the lake with the remaining sound of bull-roarer.



Fig 5. Archaeology students from the University of Hamburg, participating in a practical week of experimental archaeology.



Fig 6. Models of different Neolithic Houses in original size form the centre of the Stone Age Village.



Terra Ibèrica Festival in Calafell: a Backward Glance Through the Years (2010-2015)

| Manel Gómez Gutiérrez (CAT)

Fig 1. Ritual scene 2014 (photo by P. Edmunsson)

This article aims to show that it may be possible to identify woollen and flax fabrics from the impressions left in ceramics. To do so, the author has replicated the textiles most commonly used in the Neolithic and Bronze Age period with the help of a large and experienced group of volunteers from the Devon Guild of Spinners, Weavers and Dyers; these fabrics were then impressed into two types of clay to create impressions that could be analysed. Should major differences be found, this would enable archaeologists to identify wool and plant fibre impressions with greater reliability across a wider area, helping to reduce the gap in our knowledge of prehistoric textile technologies.

Terra Ibèrica [Iberian Land], the biggest event held at La Ciutadella Ibèrica of Calafell (Tarragona, Spain), is one of the highlights in the calendar of activities of this Iron Age reconstructed archaeological site. Now a multi-day festival, Terra Ibèrica originated from Nits Ibèriques [Iberian Nights], a re-enactment show performed every Friday and Saturday of August during the early 2000s. In 2010, it changed to the multi-day festival format with its main objective to present Iberian culture in an informative way to a wide range of public.

Since the first edition in 2010, the festival has grown thanks to the people and institutions involved in its preparation. Local associations, such as the theatre group La K-Mama, the fishermen guild, the Friends of Calafell Heritage Association, the re-enactment group Ibercalafell, and the municipality of Calafell; and individual volunteers, who love and respect local heritage, have all made important contributions to make Terra Ibèrica.

2010-2011

In 2010, the programme offered basic, dramatized visits with two Iberian characters played by staff from La Ciutadella, morning workshops for children, an Iberian food workshop, and the re-enactment show of an Iberian military camp. The festival received 512 visitors in four days.

The following year, the festival added an additional day, with the programme featuring talks by experts and the gastronomic activity, *Cossetans a Taula!*, in which local restaurants prepared dishes inspired by food products documented in Iberian times. This edition revolved around the evolution of the site from a village to a fortified citadel during the fifth to third centuries BCE. The main activities of the programme focused on this theme.

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2012-2015: Introducing OpenArch

The 2012 edition was a bit more ambitious in the sense that there was an extension of the festival duration, and therefore more activities for the public. This festival had as a conceptual basis the historical moment when Romans arrived on the Iberian Peninsula (218 BCE) in the context of the Second Punic War (218-201 BCE). Most of the programme activities incorporated this historic fact as a common thread. An exhibition about Iberians, thematic visits, activities for families and children, conferences about re-enactment, battles, epigraphy and food in the ancient times plus the involvement of local restaurants in the *Cossetans a Taula!* were included in the programme.

Furthermore, this edition was the first organised in partnership with the EU Culture Programme project, OpenArch. Being that *Terra Ibèrica* as an event attracts more public to La Ciutadella, and that the aim is to present Iberian culture by promoting both the tangible and intangible past, we thought this activity would fit in OpenArch's work package 3 (The Dialogue with the Visitor) as we use different resources in order for our visitors to have a good experience. The historical re-enactment show is perhaps the highlight of the festival. In 2012, it was possible thanks to the support of OpenArch, the local group *Ibercalafell*, and the association for the recreation of the Punic Wars *Bellvm Annibalicvm*, to invite reenactors from two Spanish groups, *Iboshim* and *Athenea Prómakhos* whose participation in the re-enactment activity resulted in brilliant added value to the festival closing act. Besides the re-enactment groups, Terra Ibèrica was a good chance for other local cultural agents to get involved in Calafell's historical heritage. In 2012, the local theatre La K-Mama did a lot of volunteer work to carry out a living history show named "Romans tread on Iberian Land" collaborating with the festival by sending actors and preparing the script. For two nights, La Ciutadella became an open-air stage where visitors could see the representation of the moment when Iberians were about to be attacked by Roman warriors. In the festival's last week, we had a staff member from Amgueddfa Cymru, St Fagans National History Museum (Wales), who actively participated in the preparation work of the closing act as a result of a staff exchange in the framework of OpenArch.

The 30th anniversary of the first excavations at La Ciutadella was the core theme of 2013 edition. As many activities revolved around the excavations, archaeology was included in the preparation of programme activities for the festival. It kicked off with an exhibition of the evolution of La Ciutadella through the years, from the first excavations by University of Barcelona archaeologists Joan Santacana and Joan Sanmartí in 1983 to the present. This multimedia exhibit included the evolution of the excavations, the reconstruction in the early 1990s, and consideration of the present and future challenges at La Ciutadella. EXARC membership and participation in cooperative European projects, such as OpenArch, are mentioned as one of the milestones in the last years' inputs to continue progress with participating in European networks.

The programme had a diverse range of activities for the public, introducing novelties such as the Iberian Card for children and the *Iberotardes*, the kitchen workshop presented by an archaeologist and a local chef who demonstrated a tasting activity using documented food from Iberian times. The closing act was "The Whisper of Stones", a show that combined museum theatre and historical re-enactment scenes about the evolution of La Ciutadella since its excavations. *Evocati Apri Scipioni*, a Roman re-enactment association, and local theatre company *La Porta de Fusta*, both participated in this performance. OpenArch support contributed to make it possible. The number of visitors attending this edition increased to 1500 over previous editions.

In 2014, crafts and experimental archaeology played a prominent role in the programme, with OpenArch again being one of the keys. This edition of the festival revolved around the use of fire as a key element in the transformation of different natural materials. The kick



Fig 2. (Top) Bronze casting activity in 2014 (photo by G. Mestre).

Fig 3. Re-enactment battle scene in 2012 (photo by J. Targa).

Fig 4. Living History show in 2012 (photo by J. Targa).

Fig 5. (Bottom) Ritual scene 2014 (photo by P. Edmunsson).

off consisted of a public presentation of experimental actions performed by archaeologist José Miguel Gallego featuring Iberian ironworking chisels, an experiment which took place at La Ciutadella in Spring 2014, and the short film *Iberians: The Secret of Iron*, a dissemination film about the ironworking process. Both activities were possible thanks to the support of OpenArch. Implementation methodologies for presenting activities to the public, learned from OpenArch partners, were more visible this year, especially with regards to the craft workshops. Museum staff and Ibercalafell members organised the *Nights of Fire*, a living history show for this edition. It consisted of a tour around the site where visitors could see different handicraft activities where the use of fire is needed in order to produce objects or food.

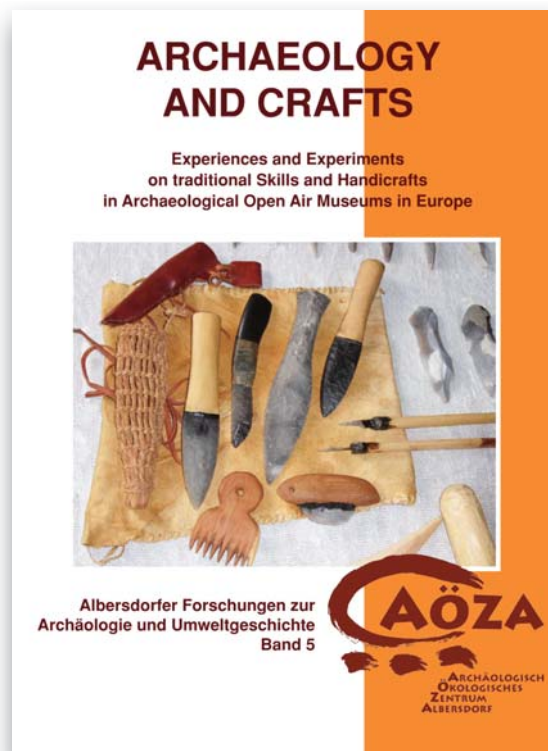
In conclusion, OpenArch has been an important contributor to the *Terra Ibèrica* festival, helping to improve the visitor's experience through a number of factors. For example, OpenArch engaged La Ciutadella educators with other project partners via staff exchanges and participation in workshops and site visits which provide extra motivation. Project objectives, have been useful in gaining knowledge and helping to improve how the story of the site is presented to our public. As a result of learning how other colleagues across Europe work, we are more aware of adding new elements to activities, as a way of improving quality on the one hand, and on the other, a way of showing European added value to our museum.

Another way of presenting European added value is by setting the Iberians in their historic context. Iberians received strong cultural influences, mainly from colonies established by Mediterranean peoples such as Phoenicians, Greeks or Carthaginians, but also influences from other peoples such as Celts, Etruscans and Romans. In this sense, we have incorporated into our activities, workshops and thematic visits, in our storytelling, in the preparation and development of activities, these elements that place La Ciutadella and the Iberian world within a European cultural context.

In the 2015 edition, the overarching theme was the Second Punic War with an *Annibal ad Portas* re-enactment show as the main activity. The organisation opted to put more resources into having more re-enactment groups, from all over Spain, to showcase scenes at La Ciutadella of ancient Greeks, Carthaginians, Romans and of course, Iberians. Beside this event were guided tours with live interpretations and workshops for families. This edition also had a good response from volunteers who were totally essential in helping La Ciutadella come to life for the visitors.



Fig 6. Live interpretation during a guided tour.



Archaeology and Crafts: Experiences and Experiments on Traditional Skills and Handicrafts in Archaeological Open Air Museums

| Doug Meyer (US)

Archaeology and Crafts is a collection of articles that were the result of an International Conference that took place in Albersdorf, Germany in September 2013. It is a collection of different perspectives on open-air museums. The articles started out with specific Albersdorf articles, moving through primitive technology and finally concluded with international aspects of open-air museums. There were great articles on primitive technology including flintknapping, stone and bronze axe replication and use and prehistoric food.

The big surprise of this book for me was Hein Klompmaker's article in which he describes empathic archaeology. It helped me to realise how Open-Air Museums get the public to understand and feel they have something in common with the interpreters. Our needs today are the same as in the past and by realizing this connection we can reconnect with our past.

This book helped me understand interpretation in Open-Air Museums and showed how a combination of archaeology, experimental archaeology and primitive technology are changing Open-Air Museums. I found the book to be well edited and written with a fresh perspective.

KELM, R., (ed.) *Archaeology and Crafts: Experiences and Experiments on Traditional Skills and Handicrafts in Archaeological Open Air Museums*. Albersdorfer Forschungen zur Archäologie und Umweltgeschichte Band 5, Archäologisch Ökologisches Zentrum Albersdorf, Husum Druck- und Verlagsgesellschaft, 2015. ISBN-10: 3898767906, ISBN-13: 978-3898767903.

Looking Back

| Björn M. Buttler Jakobsen (SE)



Over 25 years I have actively worked with knowledge dissemination and bringing history alive. From this experience I have concluded that it has been among the most fantastic developments since museums first started.

Fig 1. Picture from Skansen, Sweden.

Artur Hazelius laid the foundation for Open-Air Museums

Artur Hazelius laid the foundation for museum activity throughout the world, and already then used both objects and ways to bring historic environments alive. **Skansen in Stockholm**, Sweden, one of the first open-air museums in the world, was founded in 1891. Buildings from across the country were moved here. Open-air museums were developed around this concept across Europe.

Today there are thousands of open-air museums of different kind and status. The **Association of European Open-Air Museums (AEOM)** defines open-air museums as “scientific collections in the open air of various types of structures, which as constructional and functional entities, illustrate settlement patterns, dwellings, economy and technology” (Association of Open-Air Museums 1973, 109).

Even in Hazelius’s time dolls and people were used to try to create environments that reinforced the historical image. In the USA this type of museum with living history grew into a great success. One such investment was made by **Henry Ford in Greenfield Village**, a monument to himself and industrial development (The Henry Ford 2015). During the 1960s, a couple of years after opening, the museum had 600,000 annual visitors. His and several other investments into true history was in part a counter move to Disney who opened their first adventure park in California in 1955 (**Disneyland** 2015). Disney planned to build the history of America in a similar way. However, due to other investments this never happened.

Colonial Williamsburg was one such investment in the USA that would become a sanctuary where early American history would be visualised in its proper environment. This issue was pushed by the visionary William Goodwin with the help of John D. Rockefeller Jr.’s commitment and funding. The whole town was bought and restored to a 18th century state (Colonial Williamsburg Foundation 2015)

Activities related to re-enactment have a long history. For example, in the year AD 80, the Roman Emperor Titus organised a large event to celebrate the inauguration of the **Flavian**

Amphitheatre, including re-enactment: “the third day saw a naval battle, from which a land-engagement ensued” (Dio, LXVI.25.4). Titus re-enacted Athens’ historically disastrous attack on Syracuse in 414 BC’ (Coleman 1993, 67).

In the Middle Ages, tournaments often re-enacted historical themes from Ancient Rome or elsewhere. It was during the 19th century that historical re-enactments became widespread, reflecting the then intense romantic interest in the Middle Ages.

The **SCA (Society of Creative Anachronism)** started in 1966, when a few friends who were history buffs and science fiction and fantasy fans hosted a big outdoor event in Berkeley, California (Society for Creative Anachronism 2015).

In Europe during the 1970s a new generation of historians and social researchers had, like in the US, a new perspective. This was a desire to spread knowledge, to show the fate of the common man, and local history. At the open-air museums the interest shifted from the buildings and objects to the people behind them. The open-air museums were highlighted as a unique educational opportunity to present history in an easily understandable way.



Fig 2. (Top Left) Six miners' homes from different time periods ranging from 1805 to 1985 at St Fagans.



Fig 3. (Top Right) Map with Swedish AOAMs. www.openarchaeology.info

The **Welsh open-air museum St Fagans** has a row of six miners' homes from different time periods ranging from 1805 to 1985. The cabins are designed so that visitors can move from one to the other in order to learn about the changes from one generation to the next (See Figure 2).

A strange phenomenon occurred in the 1950s at the reconstructed Stone Age village at the open-air museum **Hjerl Hede** in Denmark. Adults and children showed the life and work in ancient times from behind a fence. It was like watching animals at a zoo, and visitors could not speak with the actors. This way of presenting Stone Age is still ongoing.



Fig 4. Sagnlandet Lejre, Denmark.

Reconstructed buildings and environments

The way of presenting the past in Hjerl Hede had an indirect influence on the development of open-air museums. It is the background of Hans-Ole Hansen, the founder of the experimental centre Lejre, now known as **Sagnlandet Lejre** (See Figure 4). When museums across the world sought inspiration they were directed toward Lejre. The project "Ancient times in the present" (Forntid i Nutid) started in 1980 at the Scanian Zoo (Skånes djurpark). For the first time in Sweden several Stone Age settlements were reconstructed.

During the 1980s a number of archaeological open-air museums were opened in Sweden. Several facilities were only made up of a single or a small number of prehistoric buildings. The dominating time period was the Viking Age. Not only buildings but a number of copies of ships were reconstructed based on discovered ship wrecks. (See Figure 3).

In the mid-1980s an archaeologist from **Lund University**, Anders Ödman, began the reconstruction of a longhouse in Hög, along with a few pit houses. It was made for experimental purposes using archaeological students and volunteers.

During the 1990s interest rose across Sweden to perform building reconstructions. An important reason for this was the extensive, legally protected archaeological activity that

had awakened the interest in ancient times with the general public. The high unemployment rate during the 1990s also played a major role. As the government could place unemployed people into activities to reconstruct ancient times, many projects became economically feasible.

A monument has been built. A time capsule that may not be touched or changed. Everything built from current scientific interpretations and theories. Sometimes a hearth has been built where it was found. But it is never lit. Furnishings are not part of the picture. We have completed our experiment and reconstructed a building. What happens next? Will they stand empty and crumble? Will we study their decay?

The monuments become visitor attractions

These reconstructed historical buildings built for an experimental purpose do in many cases obtain a new focus once completed. Even during the time of construction they can catch peoples' interest. Either in the museum grounds they are built on, or the remote location available to the archaeologists and volunteers, they become an object on display. Maybe at first as an empty building, then tied to a volunteer group who move in and bring it alive, or perhaps as a site for educational school activities. In many cases the empty buildings often become a site of educational museum activity or as a gathering place for interested volunteers.

What are their purpose and use? Knowledge and adventure. This is increasingly strengthened by tourists and museum visitors craving hands-on active learning.

Birth of networks

On the 26 October 1999 representatives of all ancient villages and facilities in Sweden gathered for the first time in Ås. Tomas Johansson and Harriet Löwenhielm thus initiated the creation of the association NSLF, the **Network of Living Ancient History in Sweden**.

The founding goal of the Swedish network was to evolve the Swedish concept into an international concept. These were the thoughts behind Tomas Johansson establishing a closer collaboration with Martin Schmidt, then head of the "Archäologisches Freilichtmuseum" in Oerlinghausen, Germany, and Roeland Paardekooper, the Netherlands. This laid the foundation of **EXARC** in 2001.

During 2007 another step was taken toward a broader approach with the founding of the association **NOOAM**, the Nordic Organisation for Archaeological Open-Air Museums, with myself as chairman.

To establish an international basis for the concept, archaeological open-air museum common guidelines were needed for reconstruction work, education, re-enacting, living history and interpretation of experimental archaeology. Across Europe several different terms were used to describe the same kind of facilities and activities, such as park, centre, ancient village, historical workshop, et cetera (See Paardekooper 2012).



Fig 5. LiveARCH meeting at Parco Montale, 2009

LiveARCH

The project *liveARCH* was a network of archaeological open-air museums funded by the EU Culture Program. It is part of ICOM's (International Council of Museums) museum concept development. Here EXARC with EU funding, where I (serving as president), Board Member Geir Sør-Reime and EXARC Director Roeland Paardekooper, could further develop this branch of museums with reconstructed environments, dressed actors and interiors, education and bringing history alive with new methods. Under *liveARCH* too, Paardekooper wrote the first ever PhD overview of this type of museums (Paardekooper 2012).

An important milestone in this work toward a unified rule set was reached at a large EU meeting within the project *liveARCH* held at Foteviken Museum in Sweden on 9 November 2007. Here it was agreed to use the common name Archaeological Open-Air Museum to describe our branch of open-air museums.

A connection was also made to the international organisation **ICOM** (International Council of Museums), which already in 1957 laid the international foundation for this type of museum. ICOM itself mentions open-air museums specifically: 'The title "open-air museum" cannot be denied to a museum of which the buildings, completely or partially, as copies or true to scale reconstructions are rebuilt after original patterns, are properly furnished and open to the public.' These concessions can be made only under the condition that: 'the original buildings of the type portrayed are no longer available (and) the copies or reconstructions are made according to the strictest scientific methods' (International Council of Museums 1956/7)



Fig 6. Working with volunteers and employees.

Volunteer activities

Another important piece of the puzzle of running and developing archaeological open-air museums was the EU project **AmaProf**, which focused on the experience of working with volunteers and employees by Middelaldercentret in Denmark and Foteviken Museum in Sweden (AmaProf 2011)

OpenArch

The project OpenArch has become the direct follow up and development of *liveARCH*. For the past five years we have worked to further strengthen the concept of open-air museums, concerning management, quality assurance, staffing issues, research and craftsmanship and obviously the relationship with our visitors (OpenArch 2015).

Traditional open-air museums in Europe are visited by millions of people. The demands of these visitors for more hands-on experience have been well met by the archaeological open-air museums.

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Archaeological Open Air Museums (AOAM) offer a unique setting in which live interpretation can make history come truly alive. For many, or perhaps all, AOAM history is the product being sold to the public. During the five years the OpenArch project has run the partners have spent many hours discussing the merits of live interpretation in the unique setting of an AOAM. It is an effective method—whether done in first or third person—to entertain and educate. But what does the visitor experience when faced with live interpretation? How does it affect the transfer of information and what are the specific goals of this method? Are there alternatives?

Live interpretation

To begin it is important to set the stage. This means that a precise definition of live interpretation is essential for determining its application, possibilities and limits. Traditionally, in the context of AOAM, it involves people in historically accurate clothing in a historically accurate setting. These interpreters of the past can perform live interpretation through different means, including but not limited to: demonstrations of historical crafts and arts, guided tours, shows, storytelling and theatre.

Of course, it is entirely possible to do live interpretation in a different setting, whereby the person interpreting the past cannot use the environment they are in, but are limited to their own person, attire, accessories and other accoutrements. This is the case with an interpreter visiting a school or conference; some living history or re-enactment events; museum theatre; et cetera. While this limits the possible subjects the interpreter can use, as long as he can use reproductions of historical objects he can offer his audience an experience of the past.

Since the goal of live interpretation is to give the audience an experience, it is very important to plan this experience and gauge the impact. The use of live interpretation is the possibility to change the performance as and when it is needed. The ability to read his audience and improvise, based on the audience's reaction, is therefore the most important skill an interpreter has.

The issue of shame

An experience elicits an emotion. This emotion can be positive or negative, but in the case of live interpretation, should always lead to a moment of realisation and education. Negative emotions should not necessarily be avoided, as they tend to leave longer-lasting memories. For instance, when someone has a sudden fright (similar to a horror film or ghost house), which is a negative emotion, it does not mean the experience as a whole is ruined. The interpreter must realise that while he could scare an adolescent or adult to elicit a response; the same tactic would not work on a toddler; they would just start crying. Again, the most important thing is to tailor the experience to the individual.

What Does Your Visitor Experience?



Making the Most of Live Interpretation in a Unique Setting

| Marc van Hasselt (NL)



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Fig 1. Two gladiators clash in the arena at Archeon.

One negative emotion that should be avoided is shame. In Dutch, we refer to 'plaatsvervangende schaamte' (vicarious shame) when someone experiences a feeling of shame on behalf of someone else. When someone is confronted by a performance they consider shameful they will generally not take the experience as positive. The vicarious shame takes over when they are confronted with, for instance, medieval beggars or lepers portrayed in an over-the-top manner. Entering an open-air museum's medieval section, the visitor is approached by a dirty-looking beggar holding out a bowl for alms. It is a scene that is repeated in castles, towns, events and other settings across Europe and the world. The visitor, however, does not know what is expected of them in this scenario, leading to indecisiveness and an overall feeling of shame. Some may be able to interact quite easily with such a performance, but this cannot be expected of the average visitor.

It is essential to give the audience clear cues on how they should react. As an example, the Gladiatorial combat in Archeon shows how this can be used. The central part of the show is the gladiator fight itself. If people were to walk into the arena, see a quick fight and then leave again, they would not have much of an experience. However, due to the way the show as a whole is built up, it can become quite unforgettable. First the rules of gladiator combat are explained by the Lanista (trainer of the gladiators). He uses a volunteer from the audience, creating a bond with them in the process. After more than half of the show is over, the gladiators themselves are called in. They enter one at a time, with the Lanista making it very clear who his personal favourite is. This creates a sense of unfairness, which elicits a strong response—the audience boos the champion.

The responses of the audience to stimuli are very much pre-programmed and predictable. At the end of the show, after the champion has lost to the underdog, the audience is then asked to decide the loser's fate. About 99% of the time, they call for his death. The big surprise is then usually that the winning gladiator complies and cuts the losers throat in a welter of blood. This creates a brief moment of shock and disbelief in the audience; "Did they actually..?" This experience can then become highly educational in both a practical sense (teaching the audience about the harshness of life in Roman times) and a more psychological and philosophical sense (this is mob rule). As an aside, to prevent the creation of too many childhood traumas, the 'dead' gladiator can be seen standing just outside the arena when the crowd leaves, covered in blood but very much alive.

Going back to the example of the beggar and the feeling of shame: when the aforementioned beggar approaches a visitor out of the blue and starts asking for alms, none of these rules for interaction are employed or engaged. It is unclear what the correct response would be, or what choices the audience is presented with. What are the consequences of giving or not giving alms? What response can be expected of the actor? What is the context of the beggar in question? When the scenario is placed in its proper context, however, it might be a very worthwhile experience after all.



The setting

There is a big difference between ‘traditional’ museums and AOAM. Central to this difference is the amount of interactivity that is possible for, but also expected of, the visitor. They are not just faced with passive objects surrounded by more-or-less interactive displays. The objects themselves are active; many of them are used by the interpreters to help create the experience. The second part of the definition given above—the historically accurate setting—comes into play. This context in which the performance is placed can help guide both the interpreter and the visitor to come to a better experience.

Continuing with the example of our shame-inducing beggar, it has been established that this performance on its own does not necessarily provide a positive experience. First the interpreter should make it clear what his role is. If interpreting in the third person, this can be easily done. In the first person, it is important to explain what the role of the character is in the wider context of the medieval setting. A beggar or, for that matter, anyone placed outside of society as a whole, is in a perfect place to criticise society from the outside. A beggar could, instead of just asking for alms, engage the audience on the evils of society that led to him becoming a beggar. They could even ask the visitor to help them by speaking up for them, simultaneously placing the visitors on the same level as the other interpreters who do have houses, food and money; and asking them to join the beggar in creating a better society. The experience as a whole is then broader than just the experience of meeting a beggar—the visitor is instead meeting the whole underside of medieval society.

This only works in an authentic setting where there are multiple characters that can be interacted with. If we look at the example of the gladiator show, the interaction of the Lanista with the audience ties the experience together—the gladiators on their own do not provide this, nor does the Lanista on his own. The visitors are invited to become part of this world for a little while and see it through the eyes of the characters that inhabit it. But to successfully accomplish this, they need a guide or interpreter. The beggar is not just asking for alms, he is asking them to experience what life was like for him for a moment. Again, this can lead to powerful experiences.

“Involve me, and I will understand.”

There are, of course, other ways to create such an experience. If an interpreter wants a visitor to experience life as a Roman Legionnaire, he can just give him a helmet and a suit of armour to try on—that is already part of the experience linking the visitor to the historical character. Similarly, giving a visitor a sword to hold and use can give them an idea of the experience of being a medieval soldier or knight. While an interpreter portraying a knight can tell a lot of stories about knighthood and interact with other characters to tell his story; the experience of hefting a sword and striking at someone will leave a lasting impression.



Fig 2. (Above Top) Visitors are invited to use all their senses during a tasting session.

Fig 3. (Above Middle) Large-scale shows also create a feeling of being part of something as a group, which can involve the audience in different ways.

Fig 4. (Above Bottom) Children withstanding a Scottish charge. Involving both for the kids and parents looking on.

Confucius is quoted as having said: “Tell me and I will forget. Show me and I may remember. Involve me and I will understand”. The most powerful way to create lasting experiences, next to *Teaching Others*, is *Learning by Doing*. This is, of course, why live interpretation is such a powerful tool for education—the interpreter can involve his audience in the work he is doing by offering them the experience of doing it for themselves.

During the OpenArch project, questionnaires were used to gauge the visitor’s experience. These questionnaires yielded important statistical data on where the visitors came from, how large the groups were and how they appreciated different aspects of their visit et cetera. They were also invited to comment on their visit, both in a positive and room-for-improvement sense. A general image of the visitor and his expectations has started to emerge. The average visitor thinks, for instance, that the catering has room for improvement, but the staff is very helpful and informative. And while there are sometimes miss-informative signs accompanying the displays, they were very happy with the chance to take part in activities. This goes to show that AOAM must manage their visitors’ expectations very carefully: when the visitors expect the same experience as when they visit a more traditional form of museum, where there are signs everywhere and the restaurant serves haute cuisine, they may be disappointed. Faced with a different experience and live interpretation in an authentic setting, they are asked to take on a role that is different from a museum visitor. AOAM ask them to become part of the story that is being told, to take an active role. The visitor, in short, is the actor.

Experiencing history

So, what is central to the visitor’s experience is the interaction between visitor and interpreter. The interpreter, as the word implies, helps the visitor make the transition from passive to active, from observer to actor.

All the AOAMs involved in the OpenArch project use live interpretation in one way or another. While most of the partners in the project use third person interpretation, there is almost always an element of role-play or theatrics being used. Many of the partners have also indicated, partly due to what they have learned during the project, that they want to introduce theatrical training for their staff.

Another example of the visitor-as-actor comes from Foteviken museum in Sweden—during their Viking markets there is often a group of Vikings who roam around looking for suitable candidates to capture and sell. Using a net, they first capture a visitor and then shackle him or her. They place a sign around their neck and then take them to market with loved ones trailing behind. At the market they proceed to list all of the desirable qualities of a *thrall* (slave) and haggle with the audience over a price. Normally, the thrall is then sold back to their loved ones for a reasonable sum.

In this example and many like it, the use of humour is very important. Slavery is a difficult subject, but by dealing with it in this light-hearted manner, it can still become a positive and unforgettable experience for the visitors. History comes alive by becoming part of it for a short moment. The interpreter guides the visitor in and back out. They leave with smiles on their faces and a deeper understanding.



Fig 5. (Above Top) Visitors are dressed up as Medieval townsfolk and are learning a Medieval dance, engaging all their senses and faculties at once.

Fig 6. (Above Bottom) The slavers hard at work, getting ready to haggle over their newest acquisition.

The Steinzeitpark Dithmarschen (DE)

Concept and Development of a Visitor Oriented Educational Centre for Sustainable Development

| Rüdiger Kelm (DE)

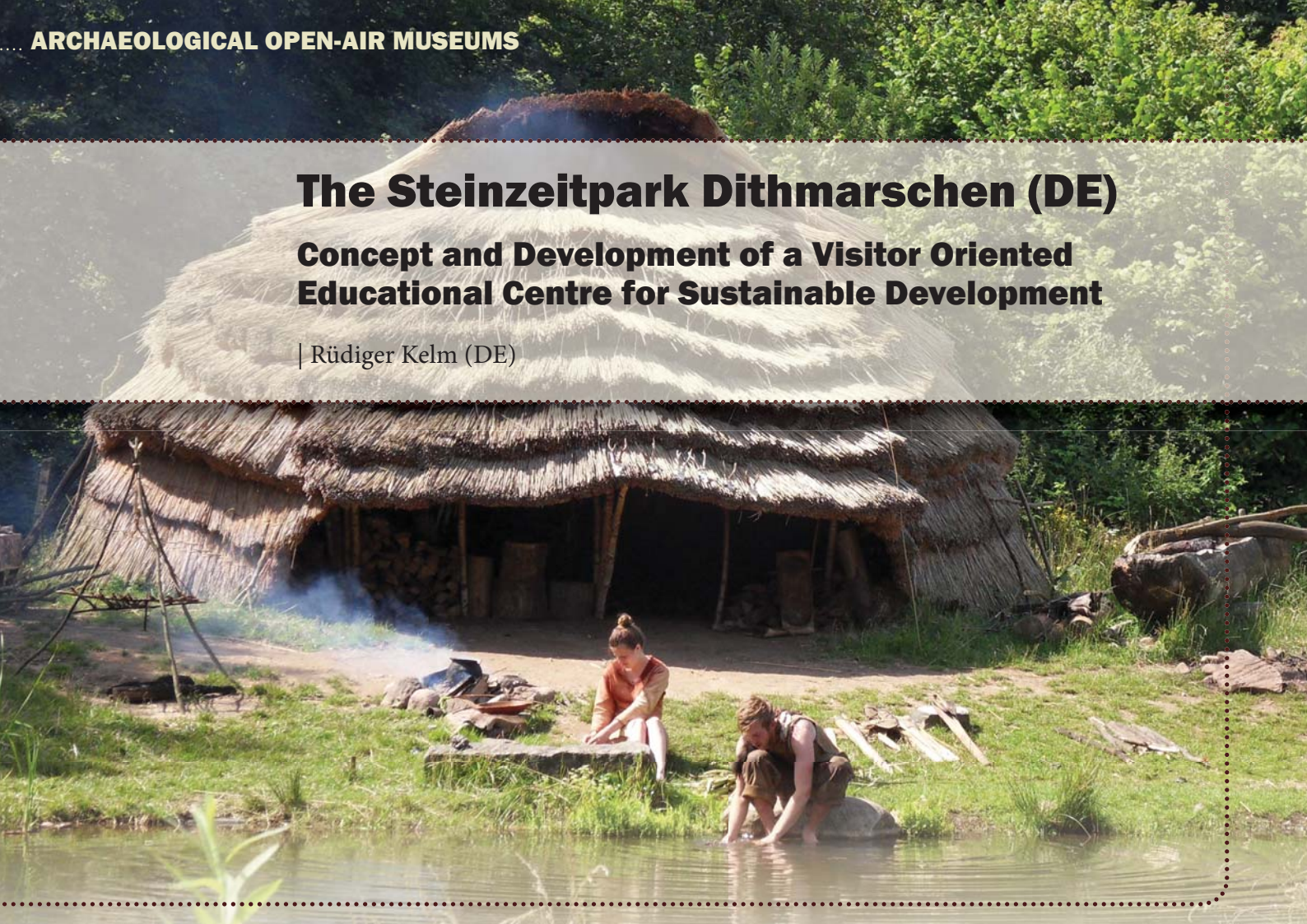


Fig 1. In 2014 a mesolithic settlement has been reconstructed in the Stone Age Park Dithmarschen in Albersdorf.

What does a Stone Age village or Stone Age house look like? Almost every person that we met answered this question with certainty. Since the research of the 19th century, the knowledge people assume to have is based on images or ‘projections’ that are well recognized in public media. An important role of our museum and pedagogic work is to critically reassess and to check the validity of these images through practical experiments within the framework of the model ‘Stone Age village’ at the Steinzeitpark Dithmarschen.

The Steinzeitpark Dithmarschen – Self-understanding and activities

The Steinzeitpark Dithmarschen in Albersdorf, in the county of Dithmarschen (Schleswig-Holstein, Germany), is an archaeological open-air museum that integrates the surrounding landscape. Since 1997 the park has been developed on a plot of land over 40 hectares large. The Stone Age Park is part of the Archaeological-Ecological Centre Albersdorf (AÖZA), a beneficiary Limited Organisation, which consists of the Museum of Archaeology and Ecology in Dithmarschen as well as a reconstructed, model-like Stone Age settlement of the early through late Neolithic periods (named ‘Stone Age village’ due to marketing reasons). The Steinzeitpark aims to teach the public about the relationship between the natural environment and the development of the land.

support from the regional government of Schleswig-Holstein, the Metropolitan region of Hamburg, and the Bingo Environment Lottery. The results included a ‘ritual house’, an area dedicated to sacrifices with a boardwalk, and a wooden platform by a newly created pond. New additions to the park include: info-pavilions in the forest, an audio guide system for the entire park grounds, the reconstruction of various large stone grave formations, and a reconstructed Bronze Age burial mound that can be visited from inside (Kelm 2011). In the spring of 2009 a new service building was opened at the parking lot, from which a shortcut to the Stone Age village was created. This path also leads visitors chronologically in a looping fashion along reconstructed, archaeologically proven house structures

With the help of a scientific committee an experience-oriented, educational concept was worked out for the expansion of the outdoor park area, which was realized in stages from the end of 2009 to the end of 2012 with

In the medium-term a new exhibition and educational centre is being planned for the entrance area of the Stone Age Park (Kelm 2007) to replace the current rented museum rooms housing the permanent exhibit.

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Ethnology and experimental archaeology as the source of archaeological analogies

Archaeology with its methods and the scientist are both on a trip to the past that is merely incomplete. Thus, the picture we have of the past is blurred. Archaeology is reliant on analogies and analogical conclusions for almost every interpretation, as finds neither 'speak' by themselves, nor for themselves or their past. The difficulty here is making broad interpretations of archaeological results based on an analogical conclusion. Because of the limitation of the reliability of the sources, one must always realize that one is theorizing instead of proving one's ideas.

In archaeological institutions like the Steinzeitpark Dithmarschen, reconstructions of finds and results are often shown and displayed or used. If you understand archaeological cultures as a material expression of a functional adaptation to the environment, then there is a large probability that similar environments in the past and present were and are similarly manipulated. But in order to state such a hypothesis a large enough amount of provable data should be presented through the formal analysis of finds and results (Eddy 1984, 25). This can be done through detailed through maps of archaeological findings and their structures, through experimental models and replicas, as well as through analogies with indigenous peoples living today. From the analyses of most of the archaeological results of central Europe, like for example for the reconstruction of the Stone Age houses from the Funnel Beaker Culture in Albersdorf which were based on concrete information from excavations in Flögeln and Pennigbüttel (Andraschko et al. 2004), no concluding answers as to the exact form and organization of the houses can be offered—especially concerning the form of the upper structures of the building. In cooperation with AGIL, Reppenstedt/Lüneburg, other excavation results and finds from similar time periods, ethnographic examples and results of archaeological housing experiments were considered during the planning of the reconstructions.

All of the model houses, the reconstructions on-site, and the furnishings in the replica of the house from Pennigbüttel and its positioning were made on the basis of diverse archaeological results predominantly from central Europe of the Neolithic period around 3000 B.C.E., and further excavations were also cited in these results (Meller 2004). In order to furnish the Stone Age house, an array of quintessential models was developed and chosen from the spectrum of high probability options. The models built include: Neolithic walls, floors, ceiling structures, separating walls, seating, looms, ovens, millstones, doors, interior furnishings, stoves, storage spaces for food and supplies, and doorsteps. Such renderings are, from a scientific and purist point of view, to be seen critically. But they can still offer visitors an idea as to the first northern German farmers' living conditions—even if the general terms of ongoing, long-term use cannot be communicated to the visitor on their short visit.

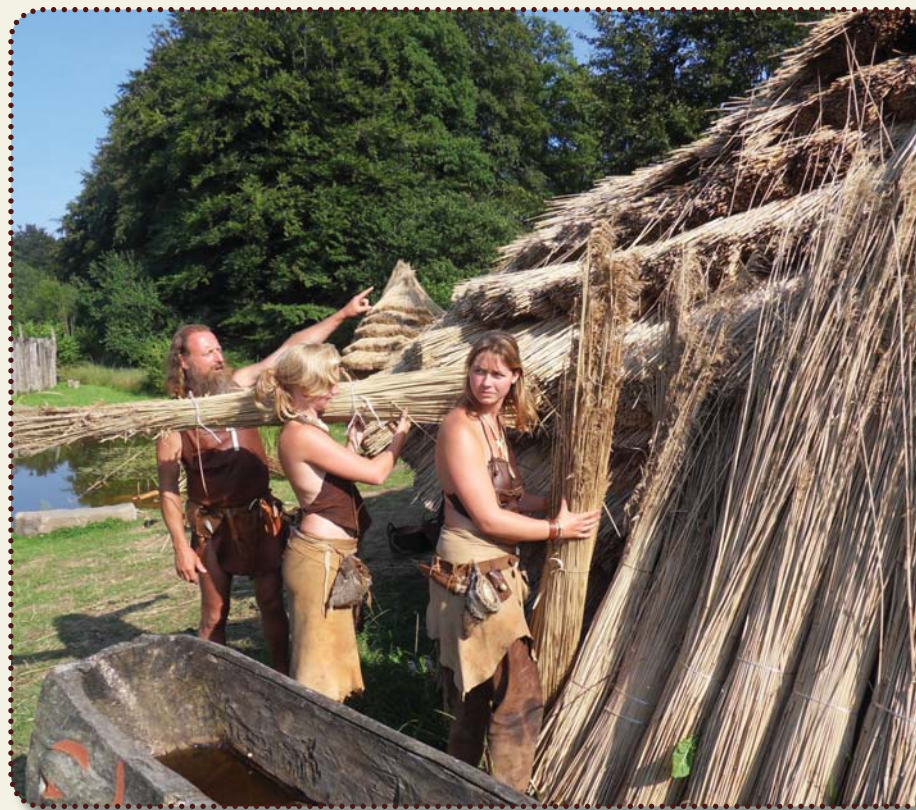
On the imparting of key competencies in an archaeological context

As disciplines, both archaeology and ethnology deal with people's natural necessities of life, with the consumption of resources, and with the possibilities to adapt to or manipulate these resources. At many environmental education centres the practical and methodical programme called, "Education for Sustainable Development", has recently been implemented. In combination with ethnology, this allows new access to the basic questions of existence. It can result in an elevated respect for physical work and takes often neglected timely dimensions into consideration.

At the Steinzeitpark Dithmarschen each educational event consists of a hands-on and an experience oriented part. Through these programmes the participants are meant to improve their personal competencies in professional skills (knowledge and insights), method competence (skills and techniques), social competence (group behaviour and interactive negotiation), as well as self-responsible behaviour. All these competencies can improve the quality of life, be applied to various essential aspects of life, and are relevant to every individual.

With different types of tools and raw materials that were typical of the time, the Steinzeitpark Dithmarschen presents the daily work of Stone Age people in the most authentic way possible. Through the right kind of motivation before the start of the practical hands-on section and an age-appropriate difficulty level, considerable attention is given to the subjective probability that children will feel that they succeeded during the programmes.

Fig 2. Also the maintenance of the archaeological structures like houses and huts is a part of the educational information for the visitors.



Quality service as the foundation of a visitor-focused approach at the Steinzeitpark Dithmarschen

The friendliness toward innovation at the Steinzeitpark, the variety, quality service, and visitor-focused approach, all of which aim toward building a base of repeat visitors, are major contributing factors to the success of the institution from the beginning. In our opinion the following elements are necessary at the Steinzeitpark for quality service that is visitor-oriented:



Fig 3. Experimental Archaeology is an important part of the demonstrations in the Stone Age Park in Albersdorf. Here working with flint-stone on wood.

- **The scientific basis of the museum**
Generally through an exchange of information with external partners, the connection to research, for themes relevant to the respective museum, should be continually guaranteed. Research on a museum's own collection or on local and regional topics would be desirable in enhancing the profile. At the Steinzeitpark, for example, there is cooperation with the universities of Kiel and Hamburg.
- **The basic concept of museum work**
The foundation of work in the institution is laid through a written statute of self-understanding, the goals of the museum, and a mission statement with a motto and a vision of the museum, which is contractually accepted by the employees. The motto of the Steinzeitpark is "Experience Nature – Culture – History, and keep it safe for the future."
- **The organization and financing of the museum**
To be able to offer the highest quality service, stability in finances, organization, and personnel is of great significance. If it is necessary to repeatedly discuss and argue over structural and financial frameworks, a lot of energy, ideas, and motivation go to waste. On the one hand, clearly regimented responsibility for particular work areas can be accounted for purely through organization. On the other hand, it should allow for enough flexibility. The limited business model (AÖZA gGmbH), which must fulfil certain criteria and functions, has been successful at the Steinzeitpark (Ossola-Haring 2004) since 2007. It has proved itself by allowing us to operate in a managerial style and to act quickly and on our own responsibility.
- **The principle of the 'dynamic museum'**
A museum being dynamic should entail regularly expanded or newly equipped exhibits, the variety and attractiveness of programme activities that can be booked at any time, and special events. Regular visitor surveys and statistics in these areas are, in my opinion, absolutely necessary as is the inclusion of those results in the planning.
- **Museum publicity**
Alongside the classic public relations work, addressing specific target groups is significant. This has to do with the institution's image as a whole and its corporate identity and how they influence people inside the institution as well as people outside of it. Badges or vests with the museum logo, serve to identify museum employees. When special events take place, the appropriate 'Stone Age' clothing is worn.
- **The certifications of the museum**
Certificates or seals of quality are also highly significant for museum institutions. The standards for receiving particular certificates can serve as corrective feedback. They also serve as advertising platforms. This applies to the Steinzeitpark in cooperation with the Institute for Management and Tourism of the Fachhochschule Westküste in Heide with its recognition as "Quality Service Institution, Germany" (since 2009) by the DEHOGA (German Hotel and Gastronomy Society) and the IHK Schleswig-Holstein (Chamber of Industry and Commerce). The Steinzeitpark has been recognized as an "Educational Centre for Sustainability" by the Department of the Environment of Schleswig-Holstein (since 2007). It has been certified as a Wunnerland-Partner for families with children through the tourism agency of Schleswig-Holstein (since 2010). And it has been placed on the "Route of European Megalithic Culture" (since 2014)—an official cultural route of the Council of Europe.
- **The staff**
The personnel of the museum is always the "face of the institution for the outside world" and needs to be trained and motivated as such. Training should be based on specialized knowledge in the subject area, as well as competencies in dealing with visitors.

Experiences and perspective

One way to continually examine the effective implementation of plans and quality offer of an educational institution that one visits in one's leisure time, which is what an archaeological open-air museum is, would be to use checklists to regularly supervise the progression of work on-site, as shown by F. Kobbe's example (2004, 90 ff.). The same principle can be utilized for the development of the Stone Age village and the museum concerning monument care, lay-out, and pedagogic-didactics. Through the Steinzeitpark working intensively with various specialized institutions and through scientific conferences, publications, and the above-mentioned certifications, the quality of the subject matter can be maintained and continually built upon.

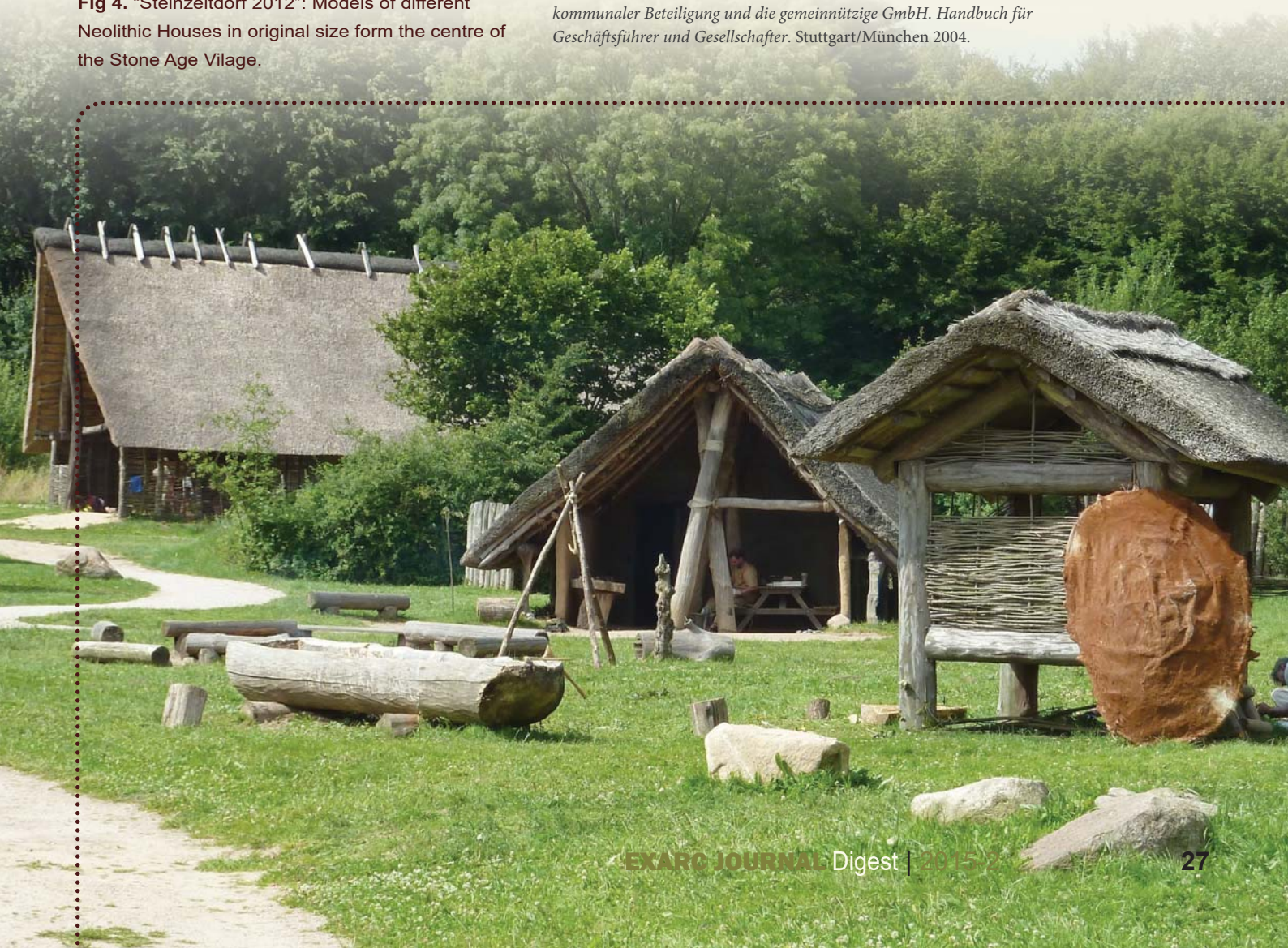
In order to secure an ongoing quality of content and attractiveness to visitors in the future, regular evaluations of work and educational programmes at the Steinzeitpark need to be carried out by way of dialogues between visitors and staff.

Out of concern for quality and continuity, it is important for regular staff and volunteers, to receive ever ongoing practical and theoretical training, which specifically pertains to an employee's particular job. A communicative work atmosphere, an ease of accessibility to the management, project-oriented work, a sensible and fair division of labour, flexibility in work times, and clear-cut job and task descriptions are necessary.

Fig 4. "Steinzeitdorf 2012": Models of different Neolithic Houses in original size form the centre of the Stone Age Village.

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Montale, the Terramara Lives

| Andrea Cardarelli,
Ilaria Pulini and
Cristiana Zanasi (IT)

Ten years ago, the results of investigations from one of the most important protohistoric settlements of the Po Plain in Italy lead to the construction of a large archaeological park. A project which, today, represents a core reality in the dissemination of experimentations.



Fig 1.
Reconstruction of the
terramara at Montale.

In 2004 the Archaeological Ethnological Museum of Modena inaugurated the Terramara Park of Montale (11 km from Modena city). This park is dedicated to the enhancement of the *terramare* culture, defined by characteristic villages of the Po River plain area (northern Italy) that during the Bronze Age, around the middle of the second millennium BC (1650 – 1170 BC), were home to one of the most important and meaningful cultural realities of European prehistory.

In April 2014 the Park celebrated its tenth birthday with a special agenda of events for the visitors, reaching an unexpected success rate with over 2000 people in attendance over three days. The realization of the Park was the result of a long season of scientific research that is still ongoing. The enduring success of the Park is rooted in this peculiar, constant and osmotic relationship between research and dissemination, which has allowed the visitors to get involved and become aware of scientific issues that would otherwise have been limited to specialist audiences.

The scientific basis for the Park's creation was provided by earlier archaeological research at Montale, particularly from the data obtained from the excavations carried out between 1996 and 2001, which led to the discovery of a stratigraphic sequence and structural aspects. The ancient dwellings, which are only partly preserved, occupy the Park's southern sector where the excavation area has been protected with a structure. Today this is a museum space with the plaster casts of the *terramara* stratigraphy and layers. Next to the archaeological area, in the Park's northern sector, the open-air museum has been set-up. Here a full-scale model of the *terramara* village has been reconstructed based on data from excavations.

The history of the Park begins in 1990 when the Archaeological Museum of Modena started the survey of *terramare* in an area near to the city. Montale was the subject of particular interest due to the large collection of remains in the Modena Museum displays that came from its *terramara*, which still form the backbone of the museum's collections today. In order to offer a product that maintains a high standard in academic research, and education and activities for schools, the museum sought to pinpoint alternative strategies so as to present the archaeological finds to best effect, thereby bridging the gap between the object and the context in which it was found, the inevitable corollary of placing things in a museum. It was from considerations of this kind that the idea took shape for a park devoted to the *terramare*, and created an adjunct to the archaeological site at Montale.

The idea of combining a visit that took in the archaeological site as well as an open-air museum that featured life-size reconstructions of houses and furnishings based on data from excavations, was inspired by the experience acquired over many years, of North European open-air archaeological museums. Our contact with the world of AOAMs (archaeological open-air museums) was essential both at the planning stage as well as during subsequent stages, regarding the management of the Park's activities.

The Park of Montale has in fact been part of the European network from its inception and has been working in synergy with leading open-air museums throughout the continent for years, often thanks to the membership to EXARC (since 2004).

The Park was set up in the ambit of a much wider project supported by the European Commission's Raphaël Project, which for a four-year period from 1998 saw the Modena Archaeological Museum working side-by-side with Vienna's

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Naturhistorisches Museum (AT) and Pfahlbaumuseum of Unteruhldingen (DE). The **Archaeolive** project has combined the experience and research of the three museums working in the field of European protohistory in a shared mission to give due attention to the Bronze Age as a period of cultural unity throughout the continent. The goal and result of the project has been the construction or diffusion of archaeological parks and open-air museums dedicated to that period.

The year 2007 saw the birth of another network of international collaboration called **liveARCH**, which involved eight open-air museums from as many European nations for three years: in addition to the Terramara Park of Montale, the partners were Historisch OpenluchtMuseum Eindhoven (NL), Matrica Múzeum és Régészeti Park (HU), Āraišu arheoloģiskais muzejparks (LV), Fotevikens Museum med Vikingareservatet (SE), Pfahlbaumuseum Unteruhldingen (DE), Lofotr Viking Museum (NO), The Scottish Crannog Centre (SCT). Members worked on different kinds of archaeological reconstructions ranging from Neolithic to the medieval period. The aim of the network was to promote knowledge and awareness about our ancient history through reconstructions of buildings and activities of the past based on archaeological evidence. In the frame of **liveARCH**, the Museum of Modena organized the *First Forum of Archaeological Open Air Museums in Europe* (Modena, 25th-29th March 2009), an important opportunity to focus on the cultural, scientific and teaching potential of AOAMs as well as on their appeal for a new kind of tourism. During the conference, the first *Guide to the Archaeological Open Air Museums in Europe* (edited in English, German and Italian) was presented within the frame of **liveARCH** by the Museum of Modena, and contained information relating to more than 200 AOAMs from all over Europe.

Since 2011, the Park of Montale is the Italian partner of the new five year EU-Culture project **OpenArch** together with eight other European AOAMs and the University of Exeter as well as EXARC. In continuity with the previous **liveARCH**, the main goal of the project is to build a partnership for a permanent collaboration between the participants—La Ciutadella Ibèrica de Calafell (CAT), Amgueddfa Cymru-St Fagans National History Museum (WAL), Archäologisch-Ökologische Zentrum Albersdorf (AÖZA) (DE), Hunebedcentrum (NL), Archeon (NL), Fotevikens Museum (SE), Kierikki Stone Age Center (FI), National Archaeological Institute of Belgrado (RS), EXARC (NL), University of Exeter (UK)—raising standards among partners and improving the visitor experience across Europe.

In the frame of **OpenArch** the Park increased in particular the relationship between research and dissemination. Since its opening in 2004, the archaeological experiments developed on pottery and metal production have been translated in didactic activities addressed to the public during their visits at the Park. *Smiths in Bronze Age Europe* is the last project undertaken in order to expand knowledge of both the tools and the techniques of the *terramare* metallurgists, combining archaeological data with experimentation, pointing out new objectives and sharing with AOAMs research methods and various ways of presenting information to diverse audiences.



Fig 2. (Above Top) The two reconstructed dwellings at the open-air museum of Montale.

Fig 3. (Above Bottom) Demonstration of bronze casting experimental activities for the public at the open-air museum of Montale.



Fig 4. (Above) Interior of a reconstructed house at the open-air museum of Montale, dedicated hypothetically to a member of the warrior's *élite*, with the replica of the complete panoply.



Fig 5. (Right) Reproduction of a pottery bowl typical for the Middle Bronze Age 3 of Montale *terramara* settlement (1450 – 1350 BC).



Fig 6. (Above Right) One of the workshop with hands-on activities for children organized at the open-air museum of Montale.

The ongoing partnership over the last ten years, between networks and projects connecting European AOAMs and related experiences, supported the Park to increase the secret of its success: the sustained commitment to high-quality education and outreach, underwritten by meticulous attention to scientific detail and a staff of archaeologists whose professionalism, experience and motivational skills were decisive in conveying the image of excellence that distinguishes the park and what it offers in terms of culture.

Over the past ten years, the park has maintained a positive balance, between public and scientific endeavours. This has been validated by the number of visitors that have attended the park, which totals 180,000 since its inauguration. Public interest is characterised by attendance from the general public and schools that have chosen the Park for a day trip or an educational visit. If this data confirms the validity of the park and the success of the cultural economy it offers, it is essential that we continue the same processes of innovation and research that have characterized the project since inception. This can be achieved through enriching the activities proposal both with the introduction of new themes and an extension of the scientific insights that accompany the demonstrations. If, therefore, energies and resources must support the renovation project of the Park, critical elements, however, shared also by other AOAM, can arise in terms of maintenance. Structures built of perishable materials and subjected to mass attendance must be continuously maintained and would therefore involve heavy investment. At present, with decreases to budgets, the reduction or absence of these interventions pose a significant risk for the AOAM, which constitutes an essential vehicle for the dissemination and knowledge of the past.

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Mural Painting of a Roman Lady from Viminacium from Roman Matron to the Modern Icon

| Jelena Anđelković Grašar and Milica Tapavički-Ilić (RS)

During the late antiquity, fresco decorated tombs had a prominent place in funerary practice. All of the scenes and motifs within tombs are dedicated to the deceased persons and their apotheosis. Usually painted on the western wall of the tomb, these portraits could represent a deceased married couple or sometimes individuals.

In very rare cases, a deceased woman is depicted alone. Depiction of a mistress of a tomb on the western wall of Viminacium's Pagan tomb G-2624, discovered in 1983, at the site Pećine (Korać 2007, 166-182), is one of these rare examples where it is possible to speak about a real portrait rendered with all designation of the masterpiece. After conservation, fresco panels from the tomb were transferred to the National Museum of Požarevac, and their copies are now set in subterranean structure, under the Mausoleum, at the Archaeological Park Viminacium (See Figures 2 and 3). During the excavations skeletal remains of two individuals were discovered indicating a funeral of an elderly man and a woman who probably died before the age of 20. It is of great importance that anthropological analysis coincides with the portrait depicted on the tomb's western wall. The best-preserved part of the skeleton, the femurs, suggested the individual age of the female skeleton, as well as her rachitic suffering (Mikić 2008, 37-45). According to Roman custom, young unmarried women wore fine nets over their heads, which is the case with the depiction of the deceased lady from the tomb (Korać 2007, 104), and since she is painted as a bust, thus avoiding the representation of her legs, it could be said that pictorial representation matches the results gained through anthropological analysis. Since the age of her death coincides with the age of her portrait, the mistress of the Pagan tomb is not depicted as a usual late antique idealized portrait of idealized age, but her representation with individual portrait features reveals an image which was made before her death.



Fig 1. Western wall of the "Pagan tomb" (G 2624) with the image of mistress of the tomb, Viminacium Mona Lisa (documentation of the Institute of Archaeology, Belgrade)

Fig 2. Aerial view of the Archaeological Park Viminacium (documentation of the Institute of Archaeology, Belgrade)

Mistress of the tomb as an image of a dignified Roman matron

The deceased woman is dressed and adorned in a fashionable style of a Roman matron. She is depicted wearing a rich dark blue *stola*, usually worn over a *tunica talaris*, thus undoubtedly suggesting matron status (Kunst 2005, 129). The *stola* is adorned with golden threads and *clavi*, as well as a sort of golden collar, decorated with ellipsoid and square ornaments, suggesting jewellery, which testify a luxury dress. Now hardly visible, a small vessel made of white glass is depicted in her right hand.





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Fig 3. The Mausoleum at "Pirivoj" site, Viminacium (documentation of the Institute of Archaeology, Belgrade)

As it is already said, her hair follows the face down to the chin, where it was transferred back, and on top of it there is a fine net. Below the net a centre parting is visible, which was the fashion of the time. She is also adorned with rich jewellery, signifying her social status, but has an important symbolical connotation. The golden square earrings with blue precious stones that she wears were commonly found within Viminacium cemeteries. Since the earrings were not merely an ornament but possessed apotropaic function for the person who wore them the blue precious stone could represent sapphire. The symbolism of this stone is multifold. It could relate to heaven, azure is an amulet against the evil eye, and thus it would not be unusual for a blue precious stone to adorn the deceased in the moment of apotheosis. The necklace made of seven pearls again testifies fashion of the time and her high social rank, but it could also suggest cult symbolism. Pearl is a lunar symbol connected with woman as the main part of her feminine creation, which plays a great role in funerary custom, where it could regenerate the deceased person by placing them in the circle of birth, life, death and rebirth (See Figure 1).

Since it is hard to speak about the portrait as a specific genre in the late antique sepulchral art, it is possible to define the image of this woman as a portrait, not only because we have the results of aforementioned anthropological analysis, but primarily because of the pictorial qualities and refined style of painting. The portrait is dominated by her big eyes. Her face is surrounded with dark brown hair and it is rendered in white-beige nuances that are very hard to gain through fresco technique. That is why the master artist polished marble face of the fresco layer and with its shine the face gained volume. Eyes, nose and lips are accentuated with brown contours. Big brown eyes are depicted in the spiritual manner of the late antiquity style, but with some kind of contemplation and vivid spirit, typical for the Fayum portraits. Her smile has a tone of archaic, and together with the whole face it looks mysterious (See Figure 1). The portrait is very important in late antique funerary art because it symbolizes apotheosis. Other scenes and motifs within the tomb are also dedicated to the apotheosis of the deceased lady. Garlands, peacocks and floral motifs reinforce the idea of immortality and afterlife (See Figure 4). A blue square area is depicted behind the portrait of the deceased woman and it could represent and symbolize *fenestella*—a sort of window, as a part of architecture, which together with the garlands suggest epiphany, and separates earthly life from the afterlife (Korać 2007, 114-115). The other opinion is that it could be a sort of nimbus (Korać 2007,

115-117) suggesting a divine person (Gerbran and Ševalije 2004, 646-647). A square nimbus, being less perfect than a circular one, should symbolise a person of secular rank. This type of blue, square nimbus is typical for the Orient (Korać 2007, 117). If the artist really wanted to depict the nimbus behind the mistress's head, it was in order to suggest her high social rank and importance (See Figure 1).

Across the deceased lady, on the opposite eastern end wall, a young man was depicted as a servant in an offering scene. Usually there are more participants within a scene depicting a funerary procession, and here the reduction to a sole servant, makes this scene more immediate, puzzling and intimate, but still with the same meaning and message. In the servant's hands there is an oval tray with ritual breads—*panis corona*— whose symbolism combined with the vine from the *cantharoi* in front of peacocks on side walls, (indicating vine as male, apropos bread as female symbol of fertile and birth) again indicates a spirit which dies and is resurrected through rebirth (Korać 2007, 96) (See Figure 4).

On the northern and southern side walls peacocks are depicted in profile, with their heads toward the portrait of the deceased lady at the west. Peacocks are among the favourite motifs of late antique and early Christian art. They may refer to the Dionysus cult or they can be present as an emblem of goddess Juno, sometimes as the symbol of princes or empress, but most frequently they signify the garden of Eden and apotheosis or immortality (Anđelković, Rogić and Nikolić 2011, 231-248). Floral motifs - garlands, four petal flowers and ivy leaves—in the background of panels with peacocks and servant are also in function of this lady's victory over death with their apotropaic and triumphant significance (Роговић and Анђелковић 2011, 85-104) (See Figure 4).

The manner of painting in the tomb also reinforces some details connected with the deceased's origin and personality. The dominant pictorial element in the tomb is symmetry, visible in the scenes as well as in composition of the tomb's space. The depiction of the lady dominates the western wall. She is represented frontally and almost perfectly symmetrical with vertical and horizontal symmetry her posture looks solemn and festive, which reinforce her role as mistress of the tomb (Anđelković Grašar, Nikolić and Rogić 2012, 254-255). Looking at the composition, peacocks on the side walls stand in the left hand, right hand symmetry in regard to the mistress, who is positioned as an axis of their symmetry and thus the centre of an idea



Fig 4. Four panels with frescoes of “Pagan tomb” (G-2624) (documentation of the Institute of Archaeology, Belgrade)

of apotheosis and immortality, which is reinforced with unnatural size of peacocks and four petal flowers (Anđelković Grašar, Nikolić and Rogić 2012, 257) (See Figure 4). The artist who had painted this portrait knew how to represent the human form, especially with the facial expression showing a hint of emotion that produced her enigmatic spiritual condition. The main achievement of this portrait is that the three dimensional face is so atypical compared to late antique paintings from neighbouring provinces. Nuances provide fine gradations with the aim to evoke softness and freshness of her skin. Use of colours of natural-mineral origin causes the reduced colouring, however harmonies of beige face and blue nimbus in the background of her head represent another quality of the portrait. All of these image qualities contribute to the fact that this portrait is one of the best rendered portraits in late antique funerary mural painting in the Balkan territory. According to the expression this portrait can be compared with the famous Fayum portraits (Zaloscser 1961) with the similarity of accentuated eyes and conspicuous individualism. The painter also followed the Roman aesthetic principles, where the portrait of the deceased represents the deepest expression of inner and spiritual life. This artistic solution, between the traditions of the East and the West, testifies of portrait which was rendered as a masterpiece (See Figure 1). According to the analyses of style and iconography, as well as coins discovered within the tomb from the period of Constantius, the painting in the ‘Pagan tomb’ can be dated between 346 and 350 AD.

As a conclusion: How Roman *Divina* became Viminacium Mona Lisa

During the excavations and research of iconography of the ‘Pagan tomb’ the magnificent portrait of this Roman lady drew great attention from various scientists who in unofficial talks liked to sentimentally call her *Divina*, because of her divine appearance. When Viminacium was established as an archaeological park in 2006, a copy of this tomb structure was set in the Pirivoj site underground, together with other two tomb structures. The idea was to present the great legacy of Roman art to the visitors, through a unique emotional experience. Thus, visitors needed to step into the dark corridor that leads to the underground with tombs, which again could convey the right impression of the afterlife ideology and the brightness of fresco colours (Anđelković 2012, 1-7). During the tour, guides explain the

whole concept, iconography and details of every particular image within the mural painting so the deceased lady kept her divine name and was introduced to visitors as Roman *Divina*. Somehow visitors themselves spontaneously gave the new name to this dignified Roman matron. Most probably because of her mysterious appearance, solemn pose, glance directed to the side and, most of all, a puzzling smile, Roman *Divina* became the Viminacium Mona Lisa.

Since 2006, every year, thousands of visitors come to the Archaeological park Viminacium to see the Viminacium Mona Lisa, the woman who wished and hoped for afterlife, which she absolutely gained, and thus became an immortal modern icon of the Archaeological park Viminacium.

Note

The article results from the project: Viminacium, Roman city and military camp – research of the material and non material culture of inhabitants, using the modern technologies of remote detection, geophysics, GIS, digitalisation and 3D visualisation (no 47018), funded by The Ministry of Education, Science and Technological Development of the Republic of Serbia.

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Tangible and Intangible Knowledge: the Unique Contribution of Archaeological Open-Air Museums

| Linda Hurcombe (UK)

Over the years my personal research interests have focussed on the less tangible elements of the past but these have been underpinned by an appreciation of the role of experimental archaeology as a research and presentation tool (Hurcombe 2004, 2008; Van de Noort et al. 2014). The OpenArch project has given me the opportunity to establish a close working relationship with archaeological open-air museums. Exeter is the only University in the partnership which is formed from nine other partners from a diverse cross-section of open air museums, and the eleventh partner is the organisation EXARC. This has placed me in a unique position as an academic researcher. This paper articulates a fundamental aspect of research and open-air museums: the relationship between tangible and intangible knowledge.

The dilemma of presenting the unknown

Archaeological Open-Air Museums (AOAMs) communicate the past to the public, and many such museums achieve this entirely with replicas and reconstructions. To do this they have to fill in the gaps in knowledge and render the intangible tangible. The first issue is the problem I have termed “the missing majority” (Hurcombe 2014). Perishable material culture does not often survive in the archaeological record and yet, in life, it would form the majority of the societies’ material culture. The second issue is that some of the most interesting aspects of social and cultural life may leave little specific evidence. Archaeologists deal with evidence and they present this in research reports where the facts can be put together to offer interpretations: what is known can be clearly separated from interpretation. In museums, the tangible artefacts can be labelled with factual information while more expansive statements and images can offer interpretations. Archaeologists and traditional museums thus present the tangible hard evidence as their primary concern with a layer of interpretation that is readily identified. In direct contrast, the AOAMs present a great deal of the intangible and interpretative material resting on a base of factual evidence which may not be present on site. This is both their unique contribution and their dilemma.

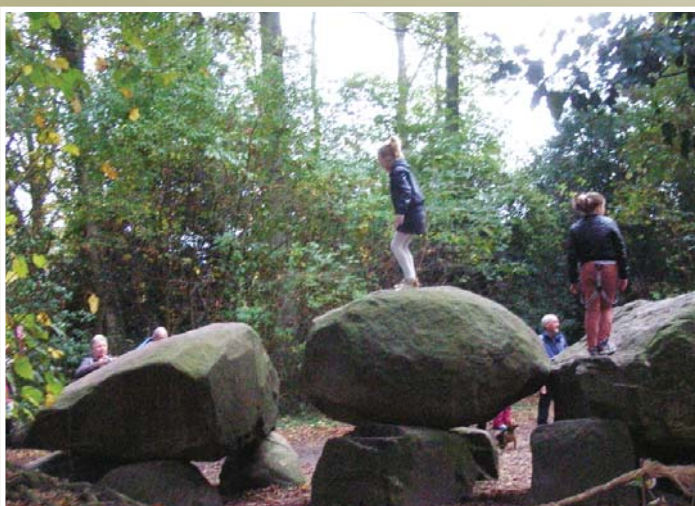
Fig 1. (Left Top) The two versions of thatching as a starting point for discussions at St Fagans, Cardiff (WAL).

Fig 2. (Left Middle) The staging of a house at *Terramare* Montale, Modena (IT).

Fig 3. (Left Bottom) Ancient monuments in the past and as a modern cultural phenomenon: The immediacy of exploring a past ritual monument in the present with detailed explanations in the museum nearby, Hunebedcentrum (NL).



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Direct evidence	Interpretation Step 1	Interpretation Step 2	Interpretation Step 3	Interpretation Step 4
Ground plan	walls reconstructed using knowledge of the available materials and technologies using reasoned assumptions from the evidence e.g. posts and walls for a house based on a groundplan	house functional building using reasoned assumptions but missing objects, context, and people e.g. a complete but empty house	home functional building with objects and furniture inside in a realistic context, but missing people: a house staged as a home e.g. a complete house with tools and furniture logically placed ready to be used	living home used by people living in it for days, weeks, or longer periods e.g. objects will come to be stored near to where they are used or where they will be safe, furniture will be moved according to social interactions; maintenance is ongoing; house, furniture and tools will be adapted to social interactions and ongoing needs
Artefact	artefact reproduced using relevant materials and technology e.g. a flint or metal blade for a knife	implement functional, perhaps backed or 'hafted'; but missing context and people e.g. hafted knife with handle	tool with other objects and in a realistic task or storage context e.g. hafted knife in a sheath with loop to hang on a belt	living tool used by people in tasks set within a social context e.g. the hafted knife and sheath are kept on the body or nearby and all are adapted to suit the user and the task's performance; maintenance is ongoing

Intangible heritage

It is a fallacy to think that experimental archaeology deals only with artefacts, structures, technologies and practical issues. Producing food and material culture requires effort, knowledge and relevant craft skills. An AOAM offers an opportunity to engage with the social as well as the practical.

The ability to show visitors skills and knowledge is a crucial aspect of the training needs identified by the management teams within OpenArch. Experience, experiment, and presentation are all interwoven with tangible and intangible aspects of the past. The agenda for the museum is to invite the visitor to explore this reconstruction of past society so craft skills and the effort to collect and process resources become part of the dialogue with the visitor. Often visitors start the discussion themselves by asking what can and cannot be known. This is the other side of the unique dilemma of presenting the unknown: the responsibility to offer a dialogue about the underlying evidence base.

Often the specific steps of research and interpretation are complex and impossible for museums to present fully. This is because as the intangible is rendered tangible, there are layers of interpretation. Reconstructed buildings, such as houses, and artefacts, such as knives, are a common feature of AOAMs and offer a familiar way of expressing this approach via worked examples as shown in Figure 4. The approach can also be simply expressed as **'groundplan → walls → house → home → living home'**.

There are multiple lines of evidence and then four steps of interpretation possible in AOAMs.

The first step is to take direct archaeological evidence and interpret it as tangible reality. As the steps of interpretation are taken the tangible evidence is augmented by drawing on other sources. These are not just from within archaeology and history, because ethnographic evidence is often used to suggest possible solutions. Engineering and many practical constraints are drawn into designs to make sure that the buildings stand up, and that the tool angle and hafting system works. Ecological evidence is used to suggest the materials available. The house with walls and roof may need specific technologies and materials to be considered alongside design features to carry the weight of the roof, as a way of dealing with extreme weather, or everyday issues such as warmth, light, airflow and smoke movement. To engage in these steps of interpretation the museum may make use of tangible archaeological evidence from other periods in the same region, or other regions in the same period. In any one house or hafted tool reconstruction there will be a wealth of such reasoned

Fig 4. The interpretive steps of presenting tangible and intangible evidence worked as two examples for a structure (house) and an artefact (knife).



Fig 5. Conflict and warfare as artefacts, structures and strategies: The siege tower in place against the walls at Calafell offers an alternative way into the building popular with children and a chance to think about the strategies of warfare Calafell (CAT).

Fig 6. (Background) Canoes at the Mesolithic Settlement, Archeon, Netherlands.

argument and often experimentation to find practical solutions. Several alternative possibilities may be shown. The dialogue with the visitor can often be prompted by showing more than one version.

Even once a house is standing there are more interpretive steps. How is the space used? Who lives in the house? These are such straightforward questions to which there may be no direct archaeological answers. Yet to leave the house bare is to give a minimalist view of the past. Many of the OpenArch discussions have focussed on the need to convey the comfort and complexity of life in the past. Klompmaker (2015) explains the empathic approach where visitors are tacitly asked to imagine these houses and artefacts in life. This dialogue can be furthered by allowing



Fig 7. Colour and ritual: The open invitation to the visitor to think about colour by using it on themselves in the Mesolithic area, Archeon (NL).

About Author

Linda Hurcombe set up the MA in Experimental Archaeology, Dept. of Archaeology, University of Exeter.

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people to live in the buildings. Here it is possible to have a three-way interaction between the museum staff, the visitors, and the people living in the houses. Not every museum offers this extra step, but where this is part of the way the museum works, there is another way of exploring the functionality of the buildings and they are given a more lived in feel.

In some museums there are skilled crafts people on staff or present as part of 'living experiences' events such as the Viking market at Foteviken and Mesolithic Living project at AÖZA. They can share knowledge and expertise and trade their goods. At AÖZA, the week of experiments by students from the University of Hamburg offered many tangible and intangible opportunities for experiments (See Friedrich and Meller, p 12, this volume). At the same time Exeter University students were also involved in passing on the skills they had learned. Thinking about the methods of passing on practical knowledge was certainly relevant to the intangible knowledge presented by staff and volunteers to the visitors, and also pertinent to ways of thinking about tacit and explicit knowledge in the past.

Sensory and social experiences

Museums where crafts are practiced in front of visitors offer the chance to experience practices unfamiliar in the modern world. Furthermore, these crafts in action offer sights, smells and sounds giving a small taste of the sensory world of past societies.

Centres which have modern families living in the reconstructed buildings, even for short periods of time offer visitors a rarity—the chance to see tangible evidence of how children might have been incorporated into the tasks and daily life of the period and how these skills might be learnt.

When archaeologists think of rituals, beliefs and performances, these can be readily identified as intangible. Some AOAMs have performances such as the theatrical gladiator show in the recreated amphitheatre at Archeon (Hogendoorn 2015), or the performance of an opera in the modern amphitheatre built directly over the Roman one at the Roman city of Viminacium. Both are modern performances but they invite the visitor to think about the Roman amphitheatres of the past as arenas for performances. It may be impossible to know exactly what performances and rituals were associated with a particular period but there is often some kind of evidence as a starting point. The work of some archaeologists at an AOAM has addressed cosmologies as an aspect of Bronze Age burial practices amongst many other issues of the past (Breuning-Madsen et al. 2003, Rasmussen 2001). Sometimes it does not matter that the archaeologists do not know the definitive aspects of the belief and ritual because to simply raise the question in the visitor's mind is enough to ensure that the visitor leaves with an appreciation of the sophistication of the past society and also an awareness that some questions remain unanswered.

The unique contribution

There is an English saying "four walls don't make a home". The key point of this article has been to show that most AOAMs take interpretive steps which do indeed go from 'walls', to 'house', to 'home'. Professional fieldworkers, academics and museum curators all make a contribution to the factual basis and its interpretation, but it is in the AOAMs where this interpretation is given its fullest life. The best open-air museums make educated guesses and put multidisciplinary information together to deal with all the missing data. In each of the interpretive steps there are also ways in which the dialogue with science can be enhanced so that new ideas and data can inform archaeological research. At every level the dialogue with science can interact in this complex and unique contribution allowing open-air museums to contribute to the generation of knowledge. Dealing with intangible knowledge is a dilemma, but also the unique contribution of AOAMs.



Kierikki Stone Age Centre - The Advantages of Being an OpenArch Funded Project

| Leena Lehtinen (FI)

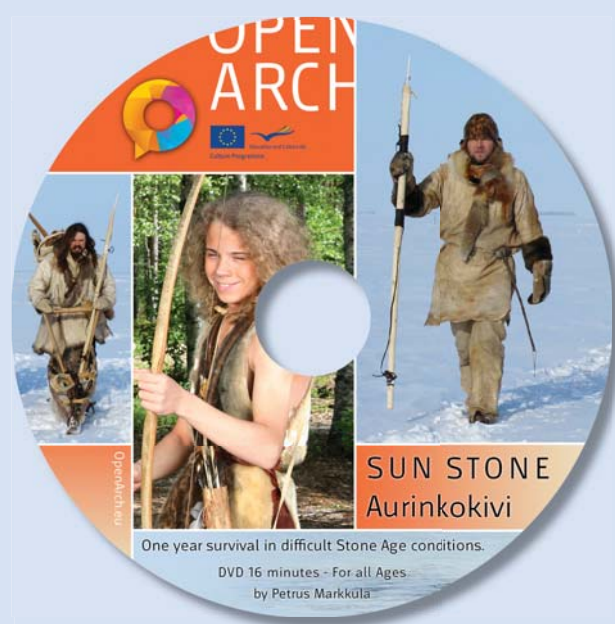
Compared to other European countries, the number of Finnish archaeological open-air museums is limited. Currently, Kierikki and Saarijärvi Stone Age villages are the only two open-air museums under the care of professional museums. Both villages specialise in the Stone Age period (Kierikki 2015; Saarijärvi 2015). Apart from these two museums, Finland also has a couple of reconstructions of Viking age houses, however these do not fall under any museum care. Since 2013, Kierikki forms part of the Museum and Science Centre Luuppi, City of Oulu.

Saarijärvi Stone Age village in Central Finland was open to public in 1980, whilst Kierikki, which also hosts a big exhibition building and its own hotel, was opened 21 years later in September 2001. Although there are not many archaeological open-air museums in Finland, they can be very valuable to experimental archaeology and other archaeological open-air museums. Their value lies in the fact that they are located within one of the largest ecosystems of northern wilderness and boreal forests of Europe and thus can show us how prehistoric humans survived in similar environments. In these forests there are thousands of Neolithic sites; according to the register of the National Board of Antiquities over 10,000 are found solely in Finland (Muinaisjäänösrekisteri 2015). This number is increasing every year as more are discovered, providing further evidence about the prehistoric communities living in Northern Europe and Scandinavia.

Kierikki is the northernmost partner of the OpenArch project, providing the EXARC community an opportunity to carry out experimental archaeology and study survival methods in different seasons close to the polar circle. The weather in this area changes from harsh winters of minus 30 degrees Celsius with 1.5 meters of snow to plus 30 degrees Celsius in the summertime. In Finland there are four different seasons and these affect the natural resources, namely animals, fish and birds, along with berries and plants. The prehistoric communities would have had to adapt to this yearly cycle. The open-air museums provide us with valuable material for research and experiments for studying the means of survival for a prehistoric human being.

Fig 1 and 2. Stone Age men in wintertime seal hunting on the ice. Photo from Sun Stone – film.

All photos in this article by Kierikki Stone Age Centre.





Despite the cold winter, Kierikki has been a favoured residence for Neolithic communities between 5000-3000 BC. Currently, a total of fifty-seven Neolithic sites are known of, with one particular important site containing a wooden fish trap of a total length of about 10 kilometres, found on both sides of the river Iijoki, around Kierikki. Several excavations, many of them international, have been carried out around Kierikki since the beginning of the 1960s and since 2006, Kierikki Centre has had a public and international excavation carried out beside the main building. The excavations in the Kierikki region have revealed over 20 Neolithic buildings, and some of those have been reconstructed in the Stone Age village.

By taking part in the **OpenArch** project, along with other partners, the archaeological open-air museum community (via internet and other networks like EXARC) obtained the possibility to try experimental archaeology with northern material culture. For example, the University of Exeter experimented with log boat construction at the Kierikki Stone Age village.

With OpenArch Kierikki was possible to obtain some important contacts and also the possibility to further develop experimental archaeology and get to know its advantages and the current situation in Europe. The funding, contacts and aims specified by the project have been extremely important. With the provided funding, Kierikki managed to achieve several objectives that would not have succeeded without the financial help.

Partial funding and complete funding was provided to Kierikki by the project. The following are some of the achievements obtained thanks to the funding: part of row house in the Stone Age village, *Sun Stone* film, experiments about iron smelting, production of different materials from reindeer carcasses, along with its filming, a new log boat made by Exeter colleagues and wood splitting experiments (OpenArch 2015). It was a privilege to have University of Exeter as one of the partners joining WP5 "Dialogue with Science". Kierikki is the smallest partner taking part in the OpenArch project and thus it is difficult to take responsibility for a task as huge as developing "Dialogue with Science". Apart from this, the University of Exeter has a large student force and carries out international research, which provides credibility to the work carried out here

The biggest problem with Kierikki has been its size—because it is such a small unit, it has only two permanent archaeologists. Most of the activities have to be carried out by temporary employed staff utilizing OpenArch funding or other sources, therefore long-standing development is a challenge. The continuity of international co-operation with experimental archaeologists is very important to Kierikki, however being so far from central Europe make travel grants necessary for it to be an active partner in the international community. Without the economic support international cooperation boils down, especially when the unit is small and far away. For proper co-operation, meeting face to face with other partners provides the opportunity to exhibit each other's works and progress, which solves the problems of communication.

In circumstances as these, small archaeological open-air museums require more support and interaction with other similar units in other countries. This is important especially in countries like Finland where there are very few archaeological open-air museums—we cannot make a well-working national network if there are only a couple of centres, rather far away from each other in a large and sparsely

Fig 2 and 3. (Top and Middle) Shipwright Brian Cumby from Exeter is making log boat in Kierikki Stone Age village summer 2013. The log boat is rolled by Tom Monard Hansen, Brian Cumby, Linda Hurcombe and Theresa Kamper Exeter and Jari Vähkyrä (leather clothes, left) from Kierikki.

Fig 4. (Bottom) British archaeology student Sarah Pickin (right) and two volunteers at Kierikkangas public excavation in summer 2007.

populated country. The best working network is an international one because archaeology is really an international discipline. Although Kierikki has formed part of several EU-projects prior to OpenArch, this latter project has been a real fluke. It is the first project which has clearly defined goals specifically focusing on archaeological open-air museums and experimental archaeology.

The richness of international archaeological research gives us a possibility to develop our national and local archaeological open-air museums by getting support and new ideas from other centres.

We have learned from OpenArch that most of the partners have similar challenges although there are differences. One such example is the fact that in Scandinavian countries using volunteers is not common and in some cases not even accepted because of collective bargaining. It is important that, when forming part of an EU Project, partners come from different parts of Europe because it brings the cultural diversity and richness of Europe. Projects can also develop the units by means of international colleagues, they can be upgraded to the international level and also the curators of museums can obtain new ideas for developing the centre.

I think that OpenArch has been successful in many ways and I would consider it amongst the best in succeeding in the following:

- Internationalization has become established; travelling and exchanges were very well supported. We frequently correspond via e-mail with different partners whom we got to know so well because we have now seen so many times. It was to our advantage that the project management was carried out by a company who knew the complicated EU legislations. It is also important that the budget lines were clearly explained and focused on certain actions, so the partners knew how much could be utilised for each activity. Although it has to be added that the project administration and budget lines are complicated and it should be developed with simpler lines.
- The opportunities for staff (not just directors) members to take part in an exchange was also a success. The flow of ideas and new contacts after the visit is probably one of most valuable achievements the project has brought.
- Conferences have been a good way to introduce the different partners. Although these were rather expensive to attend, they were the best means of presenting the different museum partners and their activities to the rest of the participants and at the same time get new ideas and find common solutions to the problems at hand.
- OpenArch project provided Kierikki with researchers from the University of Exeter, along with a totally new perspective on experimental archaeology with the help of international research—they showed us how concrete and practical it can be. The excursions to other partner museums have been real eye-openers, as we saw the diversity of European prehistory. These were a success and interesting in different ways: from the huge Archeon with its gladiators to the Roman site of Viminacium; from megaliths of Hundebedcentrum to the wild Vikings of Foteviken.
- The dissemination of information is perhaps one of the best I have seen in projects, especially the OpenArch web-pages. It is so easy to inform media or representatives of ministries and municipalities, simply by checking out the website (OpenArch 2015) where all the progress is compiled. The web-pages are also a good 'notebook' where one can check what other partners have done and compare your efforts with others.



Fig 5. Stone Age men in wintertime seal hunting on the ice. Photo from Sun Stone – film.

Personally, OpenArch has been a very important, influential and effective experience, and I very much hope that the project will continue. The fact that resources were well allocated to the main activities was very beneficial. Now that the project has come to an end, the biggest threat is that five years of successful co-operation will end. Although OpenArch has been very laborious in reporting and budgeting, it is a small thing if we look at the overall benefits.

We are now accustomed to EU projects and European partners who proudly present their own roots and local prehistory to colleagues. It is important that this co-operation continues and increases to include new partners. It is also important to be able to apply for financial support from new sources such as the European Union.



Kierikki Stone Age Centre is an archaeological museum in Yli-Ii, located in northern Finland, 55 kilometres northeast from the city of Oulu. Above: Air photo of Kierikki main building and hotel Kierikki around the pond. The archaeological site is situated on the shores of the Iijoki river and surrounded by wilderness and bog-land. The museum consists of a large central building for exhibiting finds and an auditorium showing interesting films. There is also a restaurant and a hotel. These edifices are located next to a large and famous Neolithic site complex dating to 5000-3000 BC. Kierikki is known for its public excavations, activities and school programs. It is currently open from May to October and since its opening in 2001 there has been c. 250 000 visitors. **To see more: www.kierikki.fi**

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