Podcast

EXARC Extracts 2024/4

Previous Episode: Not just a Pretty Object (/podcast/not-just-pretty-object)

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Introduction: This year's final issue of the EXARC Journal includes eight reviewed articles and six unreviewed mixed matters articles. The research topics range from ethnographic approaches to studying Iron Age bread ovens, reconstructions of Victorian clothing, and Neanderthal fire technology. In this special extended episode of EXARC Extracts, Matilda Siebrecht reads through the articles in issue 2024/4 of the journal, sharing her insights and reactions to the incredible range of research shared within.

Transcript

Hello and welcome to this fourth installment of EXARC Extracts for 2024 with me, Dr. Matilda Siebrecht, as I discuss the latest articles in our fourth edition of the EXARC Journal for 2024. All very exciting. Now, full disclosure, I'm trying something a little bit different this time. Usually, I read through the articles, I write down a short summary of each article, and I read that out as part of the episode. However, I personally really dislike reading out pre-written text, so I thought this time I would try something a little different and you will be joining me on my journey as I read through each of the articles. Don't worry, I will be sort of skimreading the articles just to get a vague idea of what they are, otherwise this would be a very long episode if I had to read through every article in extreme detail. But I thought this will hopefully be a slightly more engaging way of interacting with the journal issue and also of sharing my own insights and my own thoughts on what's happening in each of the articles. So let's get started.

Our first peer-reviewed article is entitled ***Baking Bread in the Riff Area, Morocco, an Ethnographic Approach to the Study of Iron Age Archaeological Ovens***. Written by Maria Carme Belarte, Maria Anguera, Marta Mateu, María Pastor Quiles. So a lot of different Marias involved in this one, so thank you Marias for a lovely article. So let's have a little look and see what it is. First of all, a gorgeous picture of a bread oven. I really enjoy the articles which have fantastic images with them because it's just so much more visually engaging and it's really interesting to look through. A picture tells a thousand words, after all, so I would recommend if anyone wants to submit to the EXARC

journal, please do try to find fun pictures. It's always more exciting to read through. So the article basically presents the results of field work that was conducted in the Riff area, where they looked at the characteristics and the function of several different bread-baking traditional ovens that are actually still working in the region. So they're a craft that has managed to be maintained until the present day. Keywords of this article include the chaîne opératoire of the process of making bread. And what's important is that women are the main actors in this process, in this production chain. So yes, by using the chaîne opératoire approach, it has been used a lot in the past, especially in experimental archaeological studies, and especially when looking at the uses and functions of similar culinary structures. They're going to look specifically at Iron Age settlements in different areas of the Western Mediterranean and they're combining then experimental archaeology and ethnoarchaeology in order to provide valuable information for studying the ovens and the domestic activities. First of all, they provide a slight introduction to the time period, the region, the interdisciplinary approach that they're looking at, which is all of course, very interesting. And then they go into detail with the methodology. Specifically, they're talking about, first of all, the ethnoarchaeological study. They had the help of a local guide and interpreter, which is fantastic, who then made it possible that the other women and their families were sort of able to interact with them and were kindly able to, to show them, which is always a real bargain if you're able to have that contact with the local community as well. That meant that they were actually able to participate and document the entire process of making bread in these different ovens. Going from, really from the very start, obtaining flour from milling the grains. Sometimes the flour had been purchased, but you know, some of the families even milled the cereals themselves to create the flour. So going literally through all of the steps in order to bake bread in these ovens. And they talk about the interesting fact that it's a specific data collection method known as 'participant observation' technique that they used, which is very commonly used, for example, in ethnography. They talk a little bit about the sort of pros and cons of that and how that might impact the data that they actually collected. They then go into slightly more detail about different Iron Age ovens in the northeastern Mediterranean and specifically the contribution of experimental archaeology in building and using reconstructed ovens. They suggest a couple of different studies that would be interesting to have a look at in terms of similar experiments. They talk about previous experiments that they have carried out in 2021 and 2022. They created replicas of the ovens and sometimes they used replicas of existing structures on site that they then sort of partly remodeled and sometimes they built completely new ones, which I think is quite interesting, actually. They talk a little about the sort of dimensions and the shapes and the information about that. Then they talk about the ethnographic approach specifically, so traditional ovens in the Riff area, and they provide a little bit of a summary of Riffian architecture from that time. And then they go into detail of all of the buildings, structures, and utensils related to bread baking, which is very detailed. They have a lovely little table here with tools and descriptions and what those tools are used for. They also discuss the characteristics of the ovens in a lot of detail, so they have specific oven types that they discuss, they have different oven groupings that they discuss, and they talk about the particular style, the particular designs of these ovens. And then talking about lighting the oven, using it for bread baking and how that works in terms of actual baking of the bread. So, talking about how long to let the dough stand for, how to sprinkle water on it, how to remove and redo the embers of the fire, that kind of thing. Of course, some of these ovens aren't necessarily just used for bread, so they talk about that as well, the 'Beyond Bread', very nice little title of a section there. And then they're talking about the social dimension of bread making. So the fact that it is a female-led activity, how that works in terms of the kind of social interactions carried around this traditional technology, and how it is passed down as well, through the generations, which is really interesting. Finally, they conclude with some useful lessons that they learnt through this study, through the experimental and ethno-archaeological study. As with most experimental studies of these types, it provided a lot of data that could be used for sort of further research and further interpretation, but they already can interpret a lot about the specific archaeological combustion structures of that area, in terms of sharing of different characteristics, in terms of different uses, in terms of social interactions surrounding the ovens. So yeah, definitely a very in-depth and a very interesting study looking at a particular area, but something that will definitely be of interest to many of our members, I think. So thank you very much to the authors for that.

Next up, we have an article entitled ***An Experimental Investigation of Alternative Neolithic Harvesting Tools***, written by Marc-Philipp Häg. (As always, I very much apologize for any mispronunciation of names. Usually, with the other podcast when the guests are on, I am able to actually check with the guests before we start recording how to pronounce their names. Unfortunately, in this case, there are too many authors and I am not able to get in touch with all of them to ask what their names are.) So in this article, again, beautiful pictures, pictures of the experimental replicas that have been created. This one is looking at, as I mentioned, harvesting tools, which have actually very rarely been found during excavations at Neolithic sites in northwestern Europe, but we do know that cereals were consumed very widely in that region because we have discovered grain, for example, and all other kinds of sort of

indirect evidence for grain harvesting and cereal consumption. And so over the last 50 years, there have been quite a few different types of researchers who have shown that there's this discrepancy between the harvesting tools themselves being missing and cereal consumption having been practiced. So one suggestion was that they were just collected with their bare hands or perhaps with tools made from materials other than flint.

So the aim of this particular paper is to conduct experimental archaeology, conduct usewear analysis, and have a look at tools made from organic materials, for example shell, wood, bone, to see how they potentially could have been used to harvest. To do that they created a lot of really interesting looking experimental tools. They've got some great images in the article to show the tools. They created 26 different harvesting tools, so a really great experimental study. They looked at shell-inserted sickles, they looked at wooden sickles, a deer mandible, cattle rib, shells as a sort of handheld device. They go into detail at the start of the article about these different tool types and they provide a little summary of each one. They show why they chose those particular tools, some of the archaeological background of these tools, what evidence there is for tool use like that in other parts of the world. So a nice little overview there. They then go in to talk about the harvesting locations that they did. Most of the experiments were conducted in two locations in southwestern Germany in July 2022. They're looking at the harvest calculations in terms of sort of quantitative measurements, so the size of the collective area during the harvest was measured in meters squared. That then is important because then when you're conducting your usewear analysis, you want to understand how much each tool was used in a different way. So it may be that certain tools were not quite so efficient, shall we say, at harvesting the materials. In order to do that they then looked at the harvesting speed. They computed that as well, so in terms of the surface area divided by the minutes spent reaping and there's some lovely little graphs, also included in the article, which show all of the different quantitative results for each different tool type. They also then conducted usewear analysis, so all of the reaping tools were analyzed underneath a stereomicroscope, both before and after the harvest - which, speaking as a usewear analyst I can say is very important, because you want to know what the tool looks like before you start using it, because it may be that there's some natural wear or natural use on the object, and that is especially so if you're using organic tools, because if you think, for example, a deer usually has already used an antler, so there will be already some usewear traces. The results of the cereal harvesting relate to the different cereal types that were harvested. Each cereal type, they have one, two, three, four different cereal types listed here: Triticum aestivum, Triticum dicoccum, Hordeum vulgare, and Triticum monococcum - again, apologies, my pronunciation is appalling. So they talked about the different tools that we use to harvest those different cereal types, they compared the grain yield and the best result and how that compared amongst the different tools. So they go into detail with that and provide a little conclusion as well. Then they have a look at the qualitative results in terms of the usewear traces and - speaking as a usewear analyst - some beautiful microscopic images here. Oh, that one's beautiful! So yes, oh, I'm very happy to see these, sorry, I may be biased in this but these are very gorgeous pictures. They show images of the use observed on all of the different tools, they provide a little summary in text form describing what is being seen, what that means. Then they have a section looking at the comparison and specifically they're comparing flint and shell-based sickles. So they're looking at it in relation to another study conducted in 2019 from a team who were in Italy, another one in 2016 from a team who did a similar experiment in France in 2020. Someone else did similar experiments in Spain. So there's previous experimental quantitative data that could be compared against in order to see the difference in that respect, which I think is a really interesting approach to take and then, yes, provide a lovely little conclusion on the alternative harvesting tools and their experiences with them. So, yeah, again, I'm probably biased, but I'm always very happy to see usewear incorporated into experimental archaeology.

Next up, we have another peer-reviewed article called ***The Salme Ship Burials***, written by Jouni Jäppinen. I'm so sorry, Joni… Joni. Again, beautiful pictures. I'm probably just going to say this for every article because every article is beautiful, in terms of the pictures that are provided. This one is a little bit different because it's not looking necessarily at the function of objects or how things happen in terms of their chaîne opératoire. Instead, they are looking at reproductions in terms of seeing what kind of materials that object might have been made from. In this particular article, they're looking at something called the Salme fibulas. There was a shipwreck, which I am trying to find. Here it is. So there's a Salme II ship burial which was found on the island of Saaremaa in Estonia and there are a couple of different fibula that are found, particularly this one fibula, number SM10602:325, which was found next to one of the skeletons. This particular fibula is the one that was selected to be replicated. At the beginning of the Viking Age, iron fibulas were forged mainly from blueberry iron. So I'm assuming that that's what's going to happen, but let us read on and see what happens. So yes, the Salme archaeological finds include 12 iron fibulas, but they have chosen this particular fibula, which was found, as I say, next to the skeleton. They go into detail about exactly where it was found, how it was found, the details of it in terms of dimensions, etc. and what other fibulas were found

and where they were. The next section then talks about the Nordic fibulas and their origin. So a history of where different kinds of iron fibulas have been found throughout the years from Finland, Åland, Sweden, Norway, Denmark and Latvia. They're also assuming that there have been more iron fibulas found than those discussed here, but perhaps they weren't identified because they are so rusted. So talking a little bit about the kind of historic background of the material and of the objects themselves, they then talk about iron, the birth of iron, love that as a title for a section, talking about iron-smelting operations and iron-smelting experiments that were conducted at various times between 2004 to 2007. This article particularly reviews the main features of one smelting that was conducted in 2005, from which the resulting bloom was selected as the raw material for the fibula. Where that experiment was conducted is linked in the bibliography here as well. They talk in a lot of detail about how exactly the iron was sourced, how the bloom was created. They then go into detail of the fibula reproduction itself. So who was it who did it? By the way, it was master blacksmith Tiia Lahti from Strömfors Ironworks smithy. So, shows the importance of collaboration with expert crafts people in all of these aspects of experimental archaeology, so that's very good to see here. They talk about the prototypes. They created a few different prototypes. They discuss the actual experience of the master blacksmith. They provide some quotes from the blacksmith, which is really interesting. The photos that they provide are really fascinating as well, to show the kind of process that was taken. And then, yeah, the final words are talking about how the reproduction didn't aim to actually imitate this fibula, to forge it, you know, as a gift, to make it into a museum display case, but they wanted to understand its life cycle. So that is why they went from, really from the soil, from the bloom to the finished object. And they provide a little summary of what they saw, what they thought, and how their experience went with this experimental reproduction, replication. So a very interesting article, a bit of a short article, but really interesting, packed full of punch.

Next up, we have an article written by Alexandra Coucouzeli, Allan McRobie and Igor Kavrakov, called ***The Lefkandi-Toumba Building as a Timber-Framed Structure***. So we're getting into buildings now, we're getting into wonderful structures. The main research question of this particular article is to suggest that actually, the building - or megaron as it's referred to here - on the Toumba hill at Lefkandi in Euboea, dating to around 950 BC, which has commonly been assumed to be a building with load-bearing walls, was in fact a timber-framed structure. That raises a lot of different points that the authors already discussed within the abstract in terms of that actually it might have been that the frame was even still under construction, so it was previously assumed to be completed, but perhaps it wasn't even finished when the building was then buried under a mound, which is very interesting. The site itself is located on the summit of a hill about 270 metres from the coast, and it really stands out from similar early Iron Age contemporaries in terms of its size and its design and its very sophisticated construction. So that is why it was chosen for this particular study. The images show some really interesting floor plans, site plans, construction plans. So a very technical article, this one, in terms of, kind of, building structure, etc. First of all, the article provides a brief description of the building. Again, very technical in terms of the different parts of the building, the design of it, the material, how different posts and cross sections and all kinds of things, what different building styles were used, etc. I won't go into full detail with that because there's a lot of information, so have a look if you're interested. Then they talk about interpretations of the building and of its structure. So, talking about previous interpretations. For example, the earliest, said here go from 1982; 1994 seems to have been one of the sort of bigger interpretations, which is also written then by Coucouzeli, who is one of the authors of this article. So a sort of revival of previous interpretations through fresh experimentation. They go into detail about two different hypotheses. First, that the erection of the walls actually preceded that of the posts, so you had construction of the walls, setting up the posts, installation of the roof. And hypothesis two, which is the walls were built to their full height and the basic construction, including the roofing had been completed. And hypothesis three, which is during the process of abandonment of the building, a large part of it must have been dismantled to facilitate its filling and to form a low and regular mound or tumulus over it. Therefore the whole roof was actually removed, parts of the walls were dismantled. So all three of these hypotheses are basically challenged through this article and through the reconstruction project that this article describes. The next section looks at the LK-T building as a timber-framed structure. So supporting the argument that the authors put forth here. And it goes into, again, detail of the evidence, the structural evidence, the design, et cetera, that would support their interpretation. Again, it's a lot of detail, it's very technical. They're looking at reconstructions of the roof cover, of the joints, of the horizontal elements, all kinds of different things. The roof design itself, kind of the pitch of the gabled roof, the thatched roof, all the different options that could have been in place.

The roof itself, the production of the timber frame and the roof gets its whole own section, and again, they talk about not just the kind of technical side of things, but also historic examples and archaeological examples, even looking for example at the Odyssey, at Japanese daiku. So taking a lot from historic sources to see what similar timber frame

buildings in Northern Europe, in other areas within Southern Europe, how they would have been built at this time. They look at different stages. So stage one is the Preparation, stage two Setting out, stage three Joint-carving, stage four Assembly and stage five Roof pitch and cover. And then they talk about the implications in terms of the state of completion of the building, because it seems that one of the big assumptions, as I mentioned at the beginning, was that this building was finished, but actually the authors here argue that it probably wasn't finished. So this section goes into a little more detail with that. They talk about the structural integrity of the timber frame and then provide their conclusions in terms of why they believe that actually their hypothesis and their argument is the more likely one based on the evidence provided. So indeed a very technical article, but some really beautiful, technical drawings as well, of the building itself. And if you're interested in building construction and that side of things - which I know a lot of our members are - definitely want to check out and have a look at.

We have the next article: ***Does the Addition of Manganese Dioxide Aid in The Production of An Ember when Using Strike-A-Light Technology With Horse Hoof Fungus? A Potential Neanderthal Technology***. Ooh, we're going back in time. Written by Charlotte Clarke, Peter Hommel, James Utley and Christopher Scott. The title picture looks initially like something very interesting. It is apparently the dried hoof fungus. Certain experimental, recent archaeological and experimental work suggests that Neanderthals may have been purposefully gathering manganese dioxide to aid in their fire lighting. So in this particular article, they are contributing to this discussion and this research theory by adding manganese to horse hoof tinder fungus and then generating embers using a flint tool and an iron sulfide striker light. So unfortunately they already say in the abstract that the results show that adding manganese dioxide did not improve spark capture or confer any perceptible advantage in fire lighting. So let us read on and see what exactly it shows. The introduction talks about fire. Talks about how you make fire, how fire is started, historically, archaeologically. What different evidence we have for fire starting in the past, specifically for Neanderthal fire lighting. The next section then goes into more detail for Neanderthal evidence because of course Neanderthals lived a long, long time ago, and there is very limited direct evidence of strike-a-lights in the Middle Paleolithic, but there have been some

evidence. So for example, there's a half nodule which appears to be a radial nodule which was found and has been dated to around 50,000 years ago. And those have been interpreted as linear usewear traces that could have been created through its use as a striker light. So there's a couple of different examples provided. But yes, they go back to the work of previous authors and previous studies and discuss how that has contributed to the overall theory and discussion, and then talk about why they've decided to do what they do. So the methods and materials that they use are to test whether the addition of manganese dioxide aids in fire lighting when using primitive iron sulfide based striker light technology. They did four different experiments using sort of different variations. So one was with massive pyrite and flint, one was with manganese dioxide, massive pyrite and flint, one was with radial pyrite and flint, and one was with manganese dioxide, radial pyrite and flint. So the classic sort of multiple experiments with different combinations of different materials used in those experiments. It talks about the experimental setup, what was used, it goes into detail about the materials, so the horse hoof fungus, the iron sulfide identification as well. There's a big chemical analysis looking at exactly how they were able to determine their subsamples for the experiments. They discuss the flint tools, they discuss the manganese dioxide. It was written out in a chemical format and I've completely forgotten my high school chemistry apparently…Then of course they discuss the results. So they compare the different iron sulfide nodules, they compare the different experiments in terms of using radial pyrite versus pyrite, and they discuss those results. So it's a relatively simple, you would say, experiment, this one, but it's really asking an interesting question and I like experiments like this because, indeed, standing alone by themselves, perhaps they seem sort of small and simple, but actually they're contributing to a really large discussion and a larger body of knowledge that is all about this. All of these kinds of experiments, all these little experiments that just build up over time, they give us a much better picture, which they talk about in their conclusion as well: how they've supported work done by other authors, how they've contributed to the overall debate. So yeah, great article.

Our next one, oh this is a fun one, written by Anthony Dawson, who is one of our newest EXARC members actually - so welcome Anthony - and it says ***All Aboard! A re-enactment approach to Victorian Railway Guard's Clothing***. Another replica-based study, which is very interesting. It examines the form, the function, and the practicality of clothing worn by late 19th century railway guards in Britain. And I like this one because it comments that it takes a reenactment approach. So it's actually not just replicating the objects, but it's also, again, almost following the whole chaîne opératoire. It's commissioning the objects, wearing them, using them in an appropriate workplace. So the author actually uses it on a replica steam train based on these 19th century steam trains. It seeks really to understand how practical these uniforms were. Because I guess that's the case in a lot of these historic uniforms, you see people wearing these specific things in photographs, you see that written down in practical

manuals, but actually at the end of the day, you think, well, but were people actually wearing them that way? If you think of a suit… in terms of practicality, they're used for very specific things. So they might look nice and they might be featured in photos, but actually a football player will be featured in a photo in his suit, but he won't wear it to play football. I know that's a very random example, but hopefully you understand the point that I'm trying to make. So I'm very curious about this particular experiment. They discuss the different kind of methodologies that have been used so far in terms of the reproduction and study of historic clothing, looking at experimental archaeology, experiential archaeology, reenactment, costumed interpretation etc. And they talk about these different approaches and the kind of pros and cons of these approaches and how they can be used together. They then discuss 19th century railway guard clothing, in terms of the different types of clothing that you have, the different forms, the different styles, etc. How the clothing is put together because, of course, it's not just one piece of clothing, it's lots of different kinds of clothing. And there's some very nice pictures showing different re-enactors, showcasing their beautifully created clothing. What I like about this section as well is they're not just talking about the style of the clothing, they're talking about, indeed, it's wear-out period, how long things are expected to last, where people would be ordering them from, that kind of thing. So it's not just looking at the object as a finished object, it's looking at it in terms of its life history, in its autobiography, which I personally am always a big fan of. There's a whole section dedicated to bandoliers and pouches. Those were particularly iconic at this time, it seems. And then the article goes into the methodology that was used. They use the methodology which was laid out by Cooper in 2013, which apparently describes the following stages: material authenticity, production authenticity, investigative process, repeatability - very important indeed - dressing the body, and recording the dressed body. So anyone who thinks this is just people dressing up will be very, very wrong, because indeed they go into a lot of detail in this section about exactly where they purchased all of the material, how it was all made, and they really stick with that methodology that was laid out by Cooper in 2013. I like that they talk about how even things like, for example, in this paragraph they say: 'Railway companies in the nineteenth century did not provide shirts, socks or any other underwear: these were private purchase items'. So they really go into detail about exactly what was expected from these employees, and exactly how much of the uniform was attributed to the individual and how that went. They even talk about whistles, the different kinds of whistles that you would have. There's so much detail in here. You can really tell that the authors have a really in-depth understanding on the period and the particular context that they're involved in, in terms of reenactment.

Here indeed they discuss that they use restored Victorian railway carriages dating from 1870 to 1890, really trying to be as authentic as possible in this respect. And then, of course, they just don't discuss the materials and the clothing and the questions that were prompted to use for reflection. They discuss, indeed, the train and the duties. So, what was expected from the guards as part of their daily duties and how this would have affected the wearing of their uniforms. Then the discussion goes into a lot of detail. They discuss all of the different aspects of the uniform. So for example, the frock coats, the headdress, the bandoliers and the serge jackets. So in terms of the kind of experience of the different participants, of practical implications of the different things, a mixture of more objective results and kind of subjective results from the participants. So a really interesting combination of data there. They discuss their results and hope that future work will continue to build on the methodology that they provide. I know that there are a lot of our members who are involved in some kind of reenactment and they often feel - or at least this is some impression that I have received when chatting to people - that they often feel that they can't do any quote, real research, because all they're doing is just reenacting and they're having fun and they're trying to work stuff out, but how could they possibly make a research project out of it? This is a perfect example of a way that you can conduct real experimental, valid research that is really useful and gives real insight, doing what you would be doing anyway, basically. You just have to document things a bit more. So I'd definitely check that out if it's something that you would be interested in doing yourself, perhaps for your own reenactment activities, or if you just want to know more about Victorian railway guard clothing. A really interesting little study. Thank you very much.

So, our penultimate peer reviewed article is written by Tahere Rahimkhani and is entitled ***An Ethnoarchaeological Discussion of the Impact of Religion on Architecture in a Remote Iranian Village*.** So, two very contrasting articles, the previous article and this one. Let's have a little look and see what this one is about. This article discusses the results of a study that was conducted between 2014 and 2015. It was an ethnoarchaeological study of the architecture of Makhunik village, which is in a specific district, in Sarbisheh County, South Khorasan Province, Iran. There was an ethnoarchaeological study conducted, the architecture was then studied from different points of view and one of those points of view was the influence of religion on the architecture. They looked at Islamic writings and the Quran in order to kind of develop expectations of what this might look like, like how would you even identify religiously-influenced architecture? And then that was compared to architecture as documented in the field, also

taking into account, of course, different factors such as historical context, landscape affordances, etc. A very different study indeed, but it just goes to show the amazing range that experimental archaeology and interpretation and reenactment can have. I'm always so excited to read all of the different articles that are in the EXARC journal. So first, in terms of the introduction, they discuss the region, they discuss the previous studies that were conducted of this region and how the current study actually differs, but also is similar to those previous studies. We then go into the material and the methods, of course. They talk about the different architectural phases. There are three distinct phases: traditional phase, transitional phase and new phase. And they talk about that in relation to location, shape, materials, construction method, windows, etc. So again, quite technical. And they talk about the different types of building and the different materials in that respect. This article actually only focusses on the traditional phase, which was about 1660 to 1960 in terms of time period. The argument for this is that there are many changes that are related to modern life in other architectural phases.

So this would be the most likely one to look at… to try and remove that bias of modern life influence. The next section then goes into detail of the Makhunik village itself, the history of living in Makhunik, how long it is people have been living there. The only actual written source, apparently, is a book by Colonel Yate, where he described the village during the Qajar period, which is 1796 to 1925 AD and described the villagers, the poor people, dilapidated houses, et cetera. Of course, this is the perspective of the person writing it, right? So who knows what they actually were living like. There are unfortunately no archeological studies in the area, so it's not really sure even who the first residents of Makhunik - I apologize again if I'm mispronouncing this - were, whether they were herders and nomads or when they actually settled, and when Makhunik became a settlement. We continue looking at, for example, the livelihoods and society in Makhunik, what we do know about it, and then of course we look at Makhunik architecture and Makhunik religion. The religion was Islam and apparently they were described as a deeply religious people, where most people have memorized the Quran. The ethnoarchaeological study confirmed this. The next part looks at specifically the different Quranic verses in how they relate to architecture. Within the Quran you have almost a religious guide on how to build a house or how to evaluate a house. There's all kinds of scattered observations throughout. There's one specific point that they refer to, but there's a lot of different examples that they give of different places within the Quran where they talk about architecture. They talk about how one should build their house and what kind of things need to be taken into account. They also discuss Islamic architecture characteristics in terms of Islamic art. So again, sort of different patterns that can be seen related to Islam religious laws, Islamic laws, rules, and the laws of the Quran. Then they discuss the influencing factors that one could interpret them having on the different architecture in Makhunik based on these two things, so the Quran verses and the Islamic architecture characteristics. They go into detail with this to show what exactly they do have. They have some great pictures to show the examples that they are describing. What I really like is there's a great table which shows all of the references of architecture that are referred to within Islamic art and within the Quran. And then there's a column which says whether or not Makhunik matches that or doesn't match. Actually there's quite a lot that says it doesn't match. It sort of seems to be half half. I'm curious, I want to read on and see what the results are of this. These results are described in a lot more detail. Looking at different shapes and structures, looking at the influence of economy as well, and different factors of availability.

Also, of course, they talk about the social and cultural factors, which would incorporate religion in that respect. So not just looking at practical implications of why people were building the way they did, but the social implications, like maybe they chose it not because it was the most practical way, but because that is what their religion dictated. What's interesting is that it seems that the study is not necessarily related to religious influences. The conclusion goes into a bit more detail with this. If you're interested in finding out more, I would definitely read the article itself. It seems like a very nuanced discussion, so there is, of course, a lot more complications to just saying it was or it wasn't. But, yeah, I really think that that's a very interesting study, looking at something in a bit of a different light. And again, it's one of those things that I suppose you go in and maybe you would assume that it is one way, but actually it turns out it's a completely different way. So, very different study, very interesting study.

Okay and now we're onto the final article. This is entitled ***Experimental Recreation of a Pumpkin (Cucurbita spp.) Leather Mat*** by Crystal A. Dozier and Arland L. Wallace. There is a beautiful picture of the mat, the original mat, that I can see. The context of this particular study is the American Great Plains, so in North America. There is a rich ethnohistoric record from this area which happens to indicate that dried pumpkin strips were often woven into mats as a form of food storage, which I think is really fascinating. I have not heard of this, at all. This particular study is an experimental reproduction and it used ethno-historic records to recreate these pumpkin mats. They used bone and stone tools. They particularly paid attention, not just to the finished product, and not just to the tools, but also to the types of residue and the by-products that were created. This looks really fascinating. Again, looking at the kind of

chaîne opératoire, directly from the original creation of the tools, from the raw cow scapula, and then, going down all the way to the different kinds of tools. This looks like a really interdisciplinary study, because they're looking not just at the experiments, but they're also looking at the residues. They're looking at sort of micro fossil evidence, they're looking at chemical biomarkers and ancient DNAs, or no, they're not looking at ancient DNAs, my apologies, they're saying that they didn't have that, so therefore perhaps there's plenty more that could be investigated, in this respect. But indeed, what I like about this is they're doing the replication in order to be able to see, okay, if we don't have these mats saved in the archaeological record, perhaps we could instead see evidence that the mats were being made by looking at the tools, in terms of the residue. I'm not sure if they do, use wear analysis in this one. I'll have to keep reading and see. If not, I can definitely recommend doing usewear analysis. So first, following the introduction into kind of the contextual background, the ethno-historic background, they look in more detail at the ethno-historic records for this particular technology, this particular material. They provide a couple of different quotes, they provide some different examples of evidence of why the assumption is that people would have done this. They also reference other examples of pumpkin use among indigenous peoples of North America. And then of course they talk about the pumpkins, squashes and gourds. The different species, where they are grown, their current cultivation, most common uses, their origin. The next part looks in more detail at materials and methods. Eight medium pumpkins were used and I love this as they come from Veg-Fresh Farms labelled as "Good Life Organic Pie Pumpkin". I wonder whether the authors managed to get some good pumpkin pie out of this as well as a by-product of the experiments... The bone knives used were created from bison scapula and they talk in detail about how they actually created those knives as well, which I quite like. They also have cow scapula, two bison scapulas and one cow scapula. They then describe how exactly they processed the pumpkins. And they processed a couple of different types of pumpkins, so they had raw pumpkins and roasted pumpkins and then discuss drying it, discuss the sensory evaluation, starch testing. There's a lot of detail going into here. Also, I see indeed, it wasn't just the bone knives. There were also lithics and flakes used. So a lot of different tools used in this one and a lot of different pumpkin types. So again, sort of mixing and matching different materials, different tools, different approaches to see if you can get a more interesting result. The discussion looks at the chaîne opératoire. It discusses the kind of two different forms of knives that were used. It discusses the difference between bone and stone tool use. And also what I really like is that they talk about, for example, novice flint knappers and how the availability of simple flakes could have actually just been expedient tools. There's a lot of really interesting points made throughout this section as well. They discuss storage and nutrition considerations. They discuss labour considerations. They don't just talk about the chaîne opératoire in terms of 'this material was used to make this thing, which was used to make this thing'. They actually again talk about the social considerations that go alongside this as well. And what I like is that they end this section with a sort of subsection entitled Recommendations for Archaeologists, which I think is really important because there's a lot of times where we as archaeologists work a bit in isolation, not through any sort of intent of our own, but just there's only so many people we know and so many people we can meet and talk to. So it's always really interesting to have these kinds of sections of an article from the craftspeople perspective for archaeologists to be able to better understand the materials that we're seeing in the archaeological record. The sort of first conclusion implies that no speciality tools were necessary, actually, it could have just been sort of expedient tools. They discuss the practical considerations of it in terms of how many people were required, also the fact that, for example - I like this - it took 10 novices most of a day to create the mats that took one or two Pawnee women an afternoon to produce in the historic period. So it just goes to show you need to know your stuff and be an expert in order to be able to do a thing properly. And I like their final sentence which is "This experiment stands as a testament to the specialized knowledge and skill of Indigenous lifeways".

So yeah, a very interesting range of peer reviewed articles in this issue. We also have some unreviewed Mixed Matters articles, we have some book reviews. We have a book review on *The Dream of the Old Town, Memories and Reflections from a Lifetime as Museum Director, by Thomas Bloch Ravn*, which is written by Helle Ingerslev Kristensen. And another book review is on a review of *Experimental Archaeology, Reconstruction of Material Heritage of Lithuania, Volume 1*. by Daiva Luchtanienė - sorry - which was reviewed by Mante van den Heuvel. Then we also have a book review of *Interpreting Science at Museums and Historic Sites by Debra A. Riet*, which was written by John Majerle - my apologies. We also have some event reviews: a review of Bronze Casting in Daugailiai, Lithuania, written by Giovanna Fregni. And a review of our conference for this year: Review of the meeting at Batavialand, Lelystad September, 2024, written by Federico Cappadona. Finally, we have a RETOLD article in Mixed Matters, which looks at CIDOC CRM and the documentation of buildings and crafts.

This episode was a little longer than usual, which was kind of the point as well. I think, on the one hand, it's nice to have sort of shorter episodes sometimes, but I think that if we want to actually have this as a podcast episode, it's

always nice to make it a little more fleshed out and a little bit more interesting for people to listen to. So, if you're interested in any of those articles, do go and check them out. All of our articles are completely free to read and download via the EXARC website, that's exarc.net, to follow the journal. Just a note, we will be also launching our new website, which will be exarc.org in the new year, but the journal will remain where it is. So, the journal will remain at exarc.net and will be linked to the new website itself. So yes, do go and check that out. For our members, you will also be shortly receiving the EXARC Journal Digest, which is our physical copy of the journal, including a sort of selection of the kind of 'top hits' of the different issues from 2024. So look out for that in the mail over the next couple of weeks - depending on where in the world you live - and there will also be some announcements and news about, for example, the EXARC Journal Digest and how that will continue in the future. You can also subscribe to the EXARC newsletter to hear more about what we are doing.

I also want to send a huge shout out to Katka Dvořáková, who is our chief editor, and Magda Zielińska, who is our chief graphic designer for the journal, and all of the rest of the journal team, the editors, the reviewers, everyone who works towards making the EXARC journal what it is, for a massive achievement, because with this issue of the EXARC journal celebrates 50 issues of the EXARC journal online, so a total of about 746 articles and if you then consider also the around 20 printed EXARC journal digests that means that for the last 14 years, we've published more than a thousand articles. So very well done to all of the journal team, a huge achievement and just goes to show how much effort has been put into making this journal what it is and what a fantastic resource it has become for EXARC and the wider EXARC membership community.

If you want to discuss these articles more, I would encourage you to join the EXARC Discord server, which again, you can find by going to our website, either of the websites, whenever, depending on when you're listening to this, we'll have information about how to join the Discord. You don't have to be a member to join the Discord, so at the moment it's open for everyone, so definitely do come and find us on there. Follow us on social media, subscribe to our newsletter. And also, of course, if you want to become part of this wonderful community of people involved in experimental archaeology, ancient technology, open-air museums, heritage interpretation, you can become an EXARC member. Everyone is welcome. As you can see from our journal, we are open to a very wide range of different research topics and experiences. So if you're interested, please do email us **info@exarc.net (mailto:info@exarc.net)**, We'd love to have you join the network.

So, that's it for 2024. Look forward to seeing you in the new year. Do let us know what you thought of this new format… if you preferred the shorter format, if you preferred this format. This one was more fun for me to do, I must say, and yeah, look forward to chatting to you in the new year. Bye everyone!