

Podcast

Podcast: Know your Needles

Previous Episode: [Future-proofing the Past \(/podcast/future-proofing-past\)](/podcast/future-proofing-the-past/)



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Guests: Emma Boast (UK) and Niina-Hannele Nuutinen (FI)

Introduction: In this month's episode of Finally Friday, Matilda chats with two specialists in nalbinding to find out all the details of the development, origins, and variety of this unique craft. Niina-Hannele Nuutinen (Nele) is the co-ordinator of the EXARC textiles working group and a masters student in Crafting Science at the University of Eastern Finland, where she looks at identifying structure vs technique in different kinds of non-woven textiles. Emma Boast is an archaeological small finds specialist with the University of York Department of Archaeology, specialising in early medieval and Viking Age material culture, and is also registered with the UK Guild of Master Craftsmen as a professional nalbinder with her business Nidavellnir.

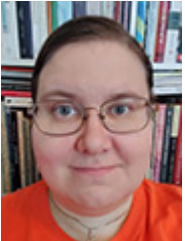
Meet our Guests



EXARC Member: Emma Boast (UK) (/members/ind/emma-boast)

Emma Boast is an archaeological small finds specialist with the University of York Department of Archaeology, specialising in early medieval and Viking Age material culture, and is also registered with the UK Guild of Master Craftsmen as a professional nalbinder with her business Nidavellnir.... **Read More** (/members/ind/emma-boast)

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Niina-Hannele Nuutinen

Niina-Hannele Nuutinen (Nele) is the co-ordinator of the EXARC textiles working group and a masters student in Crafting Science at the University of Eastern Finland, where she looks at identifying structure vs technique in different kinds of non-woven textiles.

Transcript

It's the first Friday of the month, which means that it's time for the next episode of #FinallyFriday, bringing you insights and discussions from around the world focussing on experimental archaeology, ancient technology, archaeological open-air museums and interpretation.

Matilda: Hello and welcome to #FinallyFriday. My name is Matilda Siebrecht and today I am joined by two specialists from our EXARC community and abroad, focussing on nalbinding, which we'll get to that later as a word and whether I pronounce it correctly and what it actually means. But for now, our guests!

Niina-Hannele Nuutinen, which I hope I've said correctly, I'll be referring to her as Nele for ease, is currently completing her Masters in Crafting Science at the University of Eastern Finland. Her research focusses on identifying structure vs technique in different kinds of non-woven textiles and her bachelor project looked specifically at the different ways that nalbinding was taught. She is also currently the coordinator of the EXARC Textiles Working Group, more on that later.

Emma Boast is an archaeological small finds specialist with the University of York Department of Archaeology, specialising in early medieval and Viking Age material culture. She is also a nalbinding specialist and is the UK's first nalbinding Master Craftsman to be registered with the UK Guild of Master Craftsmen. She played a key role in ensuring that nalbinding was added to the Official Endangered Heritage Crafts List in the UK with the Heritage Crafts Association UK. Through her business Nidavellnir - correct pronunciation will be heard from Emma shortly - she provides learning materials teaching nalbinding for beginners, reconstructs archaeological replicas for museums and aims to promote and develop a wider understanding of this ancient craft. She's also now branching out into wider academic research on nalbinding within the University of York and supervising further research of this subject in the UK and further afield.

So, a very warm welcome to both of you, thank you so much for coming, and I apologise for any mispronunciations that I made, especially with your name, Nele. Would you like to say it correctly, just for the record?

Nele: Niina-Hannele Nuutinen.

Matilda: There we go... and the name of your business, Emma, was that correct?

Emma: Yep, it's an old Norse name, so it can be pronounced "Nidavellnir", or "Nidavellnir" is fine, either or...

Matilda: Okay, great. So, a quick question to start both of you off. Very kind of simple, perhaps, but for a lot of people listening in, they might be listening and thinking, nalbinding? What is nalbinding? So maybe you could explain a little bit what nalbinding is and how you both first got into it. Maybe Nele, if you want to start us off?

Nele: Nalbinding is a end-led, single element looping technique, sometimes also known as a non-woven technique. It's basically interlacing the yarn with the needle, you don't always necessarily even need the needle. It's usually very loose knots in a row. I got into nalbinding because nalbinding is part of the intangible cultural heritage in Finland, especially in Eastern Finland and Karelia, where my roots lie very deep. My great-grandmother and my grandmother have known how to nalbind. But for some reason, my great-grandmother decided not to pass on the knowledge, so nalbinding is a very tacit knowledge, and I think we were joking about it that the tacit knowledge has these days moved into YouTube. So I learned to nalbind from YouTube.

Matilda: The ultimate in master-apprentice relationships, YouTube and everyone else.

Nele: Yes!

Matilda: Okay, thank you. And what about you, Emma?

Emma: For me, nalbinding, how I would describe it is very similar to how Nele has wonderfully elaborated, but it's basically just like a very simple form of textile craftsmanship, whereby you're just relying on that yarn and that needle to build these interlocking stitches and build a really strong and sturdy textile garment. My first interaction with nalbinding was many, many years ago when I was part of the historical reenactment scene for the Viking period in the UK. And I met a very lovely Swedish archaeologist, called Marie Wickerts, who was then working at the Museum of Gothenburg in Sweden. She would come over to the Jorvik Viking Festival events, and she would be teaching folks nalbinding from a Swedish perspective. But as herself being an archaeologist as well, she would be always sort of telling me about the archaeological examples and the background and the variations. So, from a very early point, encountering nalbinding, being an archaeologist and learning archaeology as an undergraduate student, I'd always had a real passion for craftsmanship processes. And a bit like Nele, my grandparents, both my grandmothers, were textile workers. They both did knitting and, God love them, they both tried to teach me many, many times. And I was that wee little child that would sit there getting quite frustrated that I couldn't quite get the technique, I didn't quite know what I was doing. I would just sit there actually and play with lengths of yarn and one needle and being like 'there has to be a better way of doing something, just with one needle and one piece of yarn'. So from that early age and through my archaeological studies and then meeting specialist nalbinding craftspeople like Marie and others, I just built and refined the specialisms and love to share it with others, like Nele.

Matilda: I'm curious, you mentioned there knitting and also when Nele was first describing it, I was thinking: oh, okay, so it's like crochet, but then you mentioned a needle rather than a crochet hook. Is it like a knitting needle? Do you have to loop the thing around it, or is it like a sewing needle with a hole in it?

Emma: The nalbinding needles we have traditionally from the archaeological record are normally about 5 to 8 centimetres in length, 2.5 to 3 inches. Some of them can have quite a narrow needle eye end, some of them can be quite wide, depending on the stitch that you're doing, but the difference between nalbinding and knitting and crochet indeed, is that it is this interlocking knotting that you're doing. You're basically having to form one stitch at a time, making sure that the tension on each stitch that you form and create is exactly the same. So it's incredibly craftsman-led. It's all down to the quality control of the craftsman and the skill level of the craftsman that's doing it. So the needle's quite simple, the yarn can be quite simple. So it's learning this applied technique. And there are different stitches, different historical and

archaeological stitches that you can learn and develop, again from archaeological examples, and they obviously vary in complexity and plant fibres to animal fibres and such, depending on the different cultures and regions that we're encountering it in. So it's a lot earlier than knitting also. Some of the earliest examples of nalbinding that we have date to around 10,000 BCE.

Matilda: Wow! And when you say evidence.... By the way, Nele, feel free to jump in at any point...

Nele: Crochet and knitting are both loop-led compared to nalbinding, which is an end-led technique and that changes a lot of the ravelingness. You know in knitting when you drop a stitch, it will unravel. Or if you're not happy with your product, you can just take the needles off and pull and you'll have just a pile of yarn. Same in crochet. In nalbinding you can't do that. If you just pull the yarn you will actually make a tighter knot. So, un-nalbinding actually takes longer time than nalbinding, unless you fix your problem with scissors and you have enough yarn to do that. Nalbinding is seen to be evolved at the Upper Neolithic. Of course, we don't have hard evidence. There is no textiles from the upper Neolithic...

Matilda: Okay. I was about to ask, what is the evidence that we have for nalbinding?

Nele: Imprints. There are clay imprints from the Czech site, it's in the Czech Republic these days.

Matilda: And you can tell just from an imprint whether it was nalbound or crocheted or knitted?

Nele: Well, because the timelines are so different. Crocheting is maybe 300 years, 350 if we are generous. Knitting is open loop structures, maybe 2000 years old, and even that is pushing. In that time frame, so the upper Neolithic or then during the End of the Stone Age, the early Metal Ages, that would be the twining that we are comparing it to. And of course there comes the issue that because you can actually do twining in a manner that you can confuse them - as an imprint - as well as knotting. Because, technically, as we have said nalbinding can be seen as knotting as well, so it's much more complex knots in knotting, but the simple forms of needle binding that are the oldest simplest, easiest ones, they are roughly 10,000... a little bit younger maybe, but around the era.

Matilda: So you say that it can be twisting, it can be twining, it can be knotting... Both of you, for example, are from different backgrounds in terms of your nalbinding knowledge and how you learnt it, so would you two also do very different styles of nalbinding? Or if we would look at what you two would both make, would we recognise both of them as nalbinding for sure?

Emma: Because we have the archaeological and historical stitches I think those are quite diagnostic, and that's how specialists such as Nele and myself can look at an imprint or a fragment of textile that survives and be able to analyse it and look at it and go: Oh yeah, it's showing me these interlocking knots, it's showing me this circular build, it's showing me the formation and the stitch, the way that the stitch is made you can compare and contrast that to similar and different types of complex stitching, from that culture and time period too. So they are definitely identifiable. The difference very much is all down to the craftsmanship, down to the individual craftsman, whether it's modern craftsmen, like Nele and myself, or whether it's a Neolithic craftsperson or a Roman period nalbinder and being able to look at the textiles that they are creating and try and deconstruct that process and understand how they were creating those items and what their own personal preferences were within creating those stitches and those structures too.

Nele: In nalbinding, especially in Finnish, we have this word, which would be 'the line of error', which is like a picture example. So if we are looking at the very simple end of nalbinding and then we compare it to something that is the African prestige capes or the Omani stitch, for the untrained eye of course you can't imagine that these are made with the same technique. It's the very same thing that if we think about in weaving something like tabby, which is one over, one under and then we have these really high end Egyptian or Roman textiles with pictures and all of that. So if you don't know that they are made with the same technique, it's difficult for you to believe. Because it's not necessary that you understand the

structures behind them. There's a lot of variation how nalbinding looks. There has been also a lot of discussion: what is nalbinding? Because the research currently being done, whether it is academic or non-academic research, is very North European-focussed. Of course, in the North we have three stitch families and the York family as a fourth one. And then sort of the simple forms, simple looping, the cross knit looping, the hourglass, all of those... are those nalbinding, are those not nalbinding? Of course, textural-wise they are, technique-wise they are, but because they are not so much present in the archaeological finds in the historical records that we have from modern Europe, they are not maybe seen as proper nalbinding, as the historical nalbinding from Scandinavia or other countries in general.

Emma: I definitely agree. I dunno whether you found also to be an issue within research in nalbinding is all the different cultural words for the craft.

Nele: Yes, just make up your mind and use one!

Emma: Yeah, very much so. We absolutely appreciate and understand that each culture, each interaction with nalbinding has its own nuances and cultural expression, artistic expression and language for it as well. But because it's not being consolidated or made very accessible in the past as an ancient craft it does make it very difficult to try and understand, like Nele says, how the Northern Atlantic and European examples compare to some of even the South American examples, the African examples, and so on. So trying to build that nalbinding craft narrative from an archaeological point of view is challenging and then how to understand that as a part of a wider reconstructive craft also then provide some interesting observations as you learn to recreate these items as well.

Matilda: Both of you have now mentioned so many different cultures and countries spread all across the world. Do we know where nalbinding actually originated? Or is it just too difficult? It sounds like from what you've both been saying, it might just be too difficult to pinpoint. Or do we have some idea?

Nele: Well, there are basically two schools in this. One of them is the Out of Africa. There are people who believe that nalbinding was invented in Africa before homo sapiens actually ventured out for the first time. Personally, I believe that nalbinding has evolved independently several times over history in different cultures all over the world.

Emma: I would agree with Nele on that. I completely appreciate the research and the thoughts of folks why they think this Out of Africa theory might be valid, but actually I'm researching an article at the moment about early nalbinding and looking at some of the very early examples of nalbinding evidence and even needles that we have from Paleolithic periods across the world. It is a world cultural craft for sure, but I do think it does develop independently and culturally in isolated areas. So it's interesting to see how those different applications of stitch and fibres and that learnt knowledge is then developed regionally and then shared within smaller community groups as well.

Matilda: Which I guess would also explain why there's so much variation as well, potentially, within it.

Nele: Well, I think most of the variation actually that we see today is from the historical era, because it is tacit knowledge, which means that some person who you know usually,

or in these days Master Youtube, teaches you, and because it's not necessarily a craft that a person does every winter, so I think there is a lot of variation happening from a mother learning to teach her daughter who is about to marry. 'How did I do this? How did my mother show this to me like 20 years ago? How did this go and I think this is something like that'.

And surprise... we have a new stitch.

Emma: That's an interesting point you bring up Nele, because I also think, examples like, you mentioned the York stitch. We have the Copper Gate sock from the Viking age that is made out of nalbinding, what is the only current extant example of nalbinding in the UK. And there has been this discussion backwards

and forwards about whether it's come in on a Scandinavian's foot, or whether it's being created and crafted by Anglo Scandinavian folks that have been living in the city of Jorvik for a couple of generations. And then they're trying to reinterpret the craft based on what they've seen from generational craftsmanship practices and whether some of these stitches are trying to mimic other stitches and they're not quite getting it right, and then they're forming another stitch, and then they're quite happy that 'oh well, it's fit for purpose, so we'll just crack on. The stitch is great. It will make a sock from it'. To what extent those mishaps and those individual variations and ways of learning are being transmuted through this craft is, again, like Nele says, very difficult to track and trace, but I think now at least we're starting to build a better timeline for this craft and a better understanding of how some of the stitches are formed and the different applications, so we just need to keep on researching, keep on discussing it, and making people more widely aware that it does exist, it's a thing!

Nele: Yeah and the York stitch and the stitch Family of York is very interesting because then we have the examples of the same family stitch from Trier. Both of these, St. Simon and St. Bernard, they've both relocated from the Mediterranean area to Trier prior to their death. Whether the hats were actually made in the Mediterranean area instead of being made in Trier... so the Jorvik sock... Anne Marie Decker recently published her interpretation of the Dublin, which she thinks is a half York or a York one. They are very interesting also whether it is the 'did mother do this like this when she was showing it to me 20 years ago?' thing or whether it is actually that there has been much more multiculturalism. Because we know that the sheep where the Jorvik sock is coming from, has been grown either in the British Isles or in southern Denmark, so we know that the sock has been made somewhere in that geographical area, so the sock itself cannot be Mediterranean, but could the person who made it be a Mediterranean or could that be just a mistake 'that Mom taught me like this and I can't remember whether it was this or not?'

Emma: Yeah, that's a great point that you raise, Nele, is that it's challenging, isn't it, to try and figure out those two different ways and transitions that the craft could be being interacted with in the past. And I think at the moment, I would say that, let's keep both of those discussions on the table...

Nele: Definitely!

Emma:... and let's continue to keep working in both veins of research and interest and just see what the archaeology can tell us, because yes, I'm very much a big fan of letting the archaeological examples speak for themselves and trying to see if we do find any more examples of this craft. But also making folks and colleagues who are archaeologists and textile historians and specialists aware that they may have nalbound items that they are discovering on archaeological sites that aren't necessarily being identified right from the get-go and/or whether there are nalbound items within museum and curatorial collections that have been just dismissed as 'ah, it might be knitting, ah, it might be crochet, ah, we'll just stick it there for now' kind of thing. So a reassessment on both levels...

Matilda: We've mentioned the fact that it was apparently so diverse in the past and we find them in so many different places. But as you mentioned, Emma, a lot of people nowadays aren't aware of it. And I suppose it's slightly different in the Nordic countries, Nele, but why do you think that nalbinding has not spread as much or continued to become such a big part of crafting in comparison to things like knitting and crochet? I'm just thinking if you ask a person on the street, they're more likely to know about knitting and crochet, I guess, than they are about nalbinding. Why do you think that might be?

Emma: Based on my experience in trying to disseminate this very fact to the lovely UK population and folks I think it's maybe just because in the UK, with our history of textile production, as soon as the 13th century and our wool production period boomed and hit and we were pulling in loads more different northern European productive methods of textile working, we were very much more like, well, we need to make these textiles quickly, we need a badabing badabong, we need to be mass-producing, or as near as mass producing as possible, to create these textiles. And as Nele has highlighted nalbinding is incredibly slow, it's a very slow craft, so it's good for individual communities and individual family groups to utilise and

share. But as trade expansion starts to occur at the end of the Viking Age from the 11th century moving forward and we start to see these building ups of regional and expansive trading ports and centres across northern Europe, that the need and the expansion for quicker-made textiles starts to kick in right from that early 13th century period and people are like 'ah, no I don't want to spend 80 hours making a hat, thank you. I would rather use this quicker technique. Oh, knitting! Lovely. I can make something in half the time. Still kind of does what I need it to do. Might not be as solid or durable, maybe, but it helps to speed up that textile process. Folks in the UK, just because that was our mainstay, our main production craft during the medieval period when the British Isles was known for its wool production and its textile production, we just borrowed a lot of those textile craftsmanship practices like knitting from France, from the Netherlands and from further afield to speed up those processes. So I think it's just been lost, nalbinding. As an island nation, I guess, its cultural identity has had to be reintegrated and brought back again. And an awful lot of people that do knitting and crochet are wonderfully surprised to hear that there was a precursor, a predecessor to those crafts and are able to interact with it from a bit more of an intuitive side of things.

Nele: One of the things, of course, is that you can't standardise nalbinding the same way that you can standardise knitting or crochet. When you're writing a pattern, you can say, okay, take a 4mm hook, use your 3.5mm needles. In nalbinding, because you don't have a standard gauge, you can't standardise patterns. When we look at the early knitting or crocheting patterns from the early 19th century, they are pretty much what we would call roadmaps these days. But in nalbinding, we still can't go past that roadmap phase of the pattern writing. You can't standardise it. It's also a very important fact that nalbinding, although we find examples and we find textiles all around the world and we find textiles for different needs, that nalbinding has never, to our current knowledge, been the main textile production method. So weaving would have been that, and you can produce all things you can nalbind with the weaving as well. So it would be that because you want to be economical, you don't want to waste any yarn you've used hours to spin, so you would be working on the nalbinding. Because nalbinding is a much slower technique to make, in a family setting, as Emma said, it's economical. Because if you make socks for a person who is going to be standing on their feet all day, it doesn't matter if you get a hole in the sock in nalbinding. It's not going to unravel. You can just mend it quickly, when you're done. If that happens in a knitted sock, you'll have to either use several hours mending. Even worse, you might have to re-knit the whole feet. So it's not economical use of time or your materials so nalbinding becomes more economic. But when you have to earn money from it, it's not economical use by no means. I can knit socks size men's average 42-43 in 15 hours. I can't nalbind a sock in 15 hours for that type, that size. Especially if you are looking for a dense, nice fabric.

Matilda: I was just thinking 'Oh, maybe nalbinding's something for me then', because I always get frustrated with my knitting and crocheting unravelling but maybe actually not if it takes 15 hours to make one sock... Obviously I know it's extremely subjective...

Emma: If folks want to experience a slow craft and a more intuitive craft and are frustrated or conversely, on following and counting numbers and the structure that comes with crochet and knitting, nalbinding is your craft because you can, once you've got your technique and once you've got your stitch formation down, you then are shaping and manipulating the stitches to form the shapes and the textile that you want. So it's a very organic craft in that respect. So, yeah it's horses for courses, isn't it? It's different personal craftsmanship choices, really, as to whether you want to spend..., like myself, I think a good pair of York stitch socks would probably take me a couple of weeks, maybe three weeks to do, consistently working at them.

Nele: Especially if you make them in gauge, because the gauge in those socks is crazy.

Emma: Exactly, you've got to choose your fights! And I'd like to think nalbinders, we've got quite a bit of patience. So we definitely do it from a passion point of view rather than a financial point of view. Even though there are obviously some folks like myself that are running little side hustles and side businesses trying to create socks and such for different historical communities, reenactment communities and from an

artistic point of view as well. But yeah, it's a different modern switch off, I think, that you have to bear in mind with nalbinding too. So it has its historical applications and then it has, as Nele has sort of hinted at, the way that modern folks are perceiving it and interacting with it, whether it's from YouTube, whether it's trying to do research for themselves and trying to understand what they're encountering as well. It's still quite a fascinating subject to try and get your head around.

Matilda: When it comes to the research side of things... as we mentioned, both of you are specialised in this topic from a research perspective as well. Was nalbinding specifically something that you always wanted to get into, or was it just that you happened to fall into that particular specialism, because it sounds indeed like it's a very specific, very particular kind of textile. Maybe Nele, if you want to start off?

Nele: I think we look at nalbinding very, very strongly from the historical and archaeological perspective. Pretty much all research that is done is done in the perspective of whether it's historical, anthropological, or archaeological view. There isn't much research done on 'this is how it's made, this is how it could be made'. It's not seen as a modern craft and there is not currently a single doctoral dissertation written on nalbinding. The closest comes Margrethe Hald's dissertation about the textiles found in the bog burials in Denmark in the Bronze Age. There is a chapter of nalbinding and Margrethe Hald is trying to find a method of classification of nalbinding stitches. That's the closest one we have. There is few articles that has been written in postdoctorate phase, but they are usually also, again, descriptions of archaeological finds. So there is very, very, little academic research done in nalbinding. When I was thinking between nalbinding, knitting, crocheting, nalbinding is definitely the least academically researched topic. There is most still to do the research and get the material out there. I think it's sad that in my thesis that I'm currently writing, the oldest source is from the 1880s, I think, Luise Schinnerer's *Antike Handarbeiten*. It tells how little of the research there is done that I actually have to refer back to sources that are written in the 1880s.

Matilda: Would you agree with that, Emma?

Emma: I certainly would agree with that. It is a challenge. I've had to attack this topic academically from multiple angles. You have to look at it from an archaeological base because that's how, indeed, when you find these artefacts within the ground, how they have to be archaeologically assessed by textile specialists, and you have to classify this object, so that you know how to curate it and look after it, and then obviously further research can then go on afterwards. Thankfully in the last couple of years I've informally supported several postgraduate master's students that have taken on the mantle of trying to do nalbinding research in the UK, which has been brilliant. But all of them have had to attack it from a history of art perspective, not from an archaeological perspective. One, mainly because there aren't considered enough archaeological examples from a cultural perspective to do, like, a cultural deep-dive of what's going on in the prehistoric period with nalbinding, what's going on in the Roman period with nalbinding etc. So everybody has had to look at it more from a broader perspective, trying to pull those research threads together and pull those resources and yes, we still very much heavily rely on the brilliant work done by Margaretha Hald. Also looking at how Egon Hansen tried to again reclassify notations for nalbinding, but utilising his experience with knitting and crochet and how that has pros and cons when you're trying to classify it in a more of a mathematical way. Like Nele has said, nalbinding doesn't really lend to the craft because it is so organic and intuitive and non-standardised. And then laterally you have folk like Karen Finch, who was a brilliant textile conservator here in the UK, originally from Denmark, and tried to attack it from a conservational point of view as well, to disseminate the information. So we've got multiple things to be working on for sure. Trying to get folks to pool their resources together and work together, in trying to better research and understand this in all its various different crafts and applications is really, really important. It's an ongoing, interesting conundrum, just to try and get a foothold for nalbinding across the board and I'm very privileged and pleased and proud to be at the University of York and start to mobilise that from my point of view now and engage with people and get other students to get this research to a higher level.

Matilda: This topic comes up a lot on this podcast because of course we have a lot of crafts people involved with experimental archaeology, but when it comes to something like this sort of a rarer craft, do you think it's essential to have experience yourself in nalbinding in order to research it? You've mentioned a couple of different examples from people or approaches that wouldn't necessarily have to do the nalbinding themselves because it's a particular approach, but would you say it's possible to do it without having that first hand experience or is it essential to have that?

Emma: From an academic point of view, I would say that it's not necessary. However, as with any academic versus practical switch off that you have going on, any material culture that you are wanting to understand fully, it really does benefit if you can, at the very bare basics, observe the craftsmanship being undertaken and then form better opinions and ideas about how these items are being created. If you have individuals such as myself and Nele, who can combine those two elements, it obviously benefits the understanding of nalbinding research overall, but I wouldn't say that just being purely academic and not practising nalbinding practically is a detriment. It just... being able to combine helps a better appreciation for the craft. What do you think, Nele?

Nele: I agree with that because we have Odd Norland who was a Norwegian religion scientist or ethnographer. He states in his book *Primitive Scandinavian Textiles*, that after observing one person of nalbinding that he thinks it's impossible for a person to know more than one style of nalbinding. And then we have this beautiful article by Toini-Inkeri Kaukonen from 1960, where she's classifying nalbinding examples that were collected from Finland in, I think, it was 1957. I'm not necessarily sure that she knew how to nalbind herself. And more than that, it's one of those questions that would be really lovely to ask both of them: whether they actually saw different amounts of loops as the different stitches. Or were they both thinking that the one method of interlacing, like the York stitch, which we have discussed in prior, or the Finnish stitch family, or the Russian stitch family, or whichever stitch family it is that we are talking about, whether they see that as one stitch and then how many loops you have in the first group and how many loops you have in the second group and how many loops you have in the potential third group, would be just a variation to sort of fit into a yarn. So it definitely helps to understand better when you know what you're talking about through the craft. But of course, you don't have to master the craft to be able to write about it.

Matilda: That's very promising seeing as it sounds like it's a very rare craft and very time-consuming to do. So hopefully there's someone out there who is listening and thinking, 'ah, okay, maybe I'll give this nalbinding thing a go'. So indeed you both do kind of slightly different approaches or different focuses in your research. I was just curious if you would provide some insight into kind of your favourite results so far or your most interesting result or something that you've discovered through your research that you might not have thought before or people might not really realise about nalbinding that you would like to share with our listeners. Perhaps Emma, if you want to go first?

Emma: Sure. Right from the early days of researching nalbinding, I was applying all my learnt artefact analysis that I did previously and seeing if I could try and do the same for this assemblage of objects around the world. And one thing that I've found right from the get-go, which I thought was really really nice, was that people were always telling me 'Oh, it doesn't exist. Oh, there's no narrative. It's not a thing. It's not a craft'. I heard this a lot when I was starting out doing research and also as a practical crafter as well. And yet when I started to look into some of these early Neolithic and potentially Paleolithic examples of nalbinding, I think just realising that there is a spectrum, definitely, of nalbinding and there's different cultural interactions and for folks such as myself and Nele and others that decide to do research in nalbinding, sort of realising that there's nothing wrong with there being variation in a fibre craft. It's not standardised and that's fine. I vividly remember talking to another textile specialist and talking to them about nalbinding and all its different cultural disseminations and variations and then sort of saying 'Oh, but nalbinding can't be a thing. Surely, otherwise the textile community and the archaeological community would have already done something on it already'. I suppose my little win is just being here and steadfast in that research, being able to have those open and honest dialogues and conversations with people that

are top textile specialists in their field and trying to get their opinion and their view on this ancient craft as well as practical craftsmen's views on it as well and just trying to provide a bridge, very much wanting to interlink folks with how to access nalbinding, but also research it appropriately. So for me, it's not necessarily one bit of golden nugget information. It's an accumulation of understanding and awareness and making folks aware that this craft does not belong to any one individual. It is a world craft. There's so many ways you can practise it and engage with it. That will basically continue to be my purview moving forward, and deep-diving into different cultures to learn more.

Nele: As we have mentioned before, the research is very Northern European-based and based on the tradition that is living in Nordic countries as well. And then of course, it's an accessibility issue. It's difficult to access materials you don't know exist, you don't know the search word to look in Arabic texts or Chinese texts or whichever language they are written in, so you need to know that it's there to look for it. Then it still requires a lot of luck to find the first one which has the correct word, after which you can search a little bit more. And that nalbinding is still a living tradition in several other places in the world, not just in the Nordic countries. It's also very interesting to look into how different applications of nalbinding has been done. I think it was somewhere in the Pacific Ocean, where they have pretty much nalbinding done armours and when we are saying: you can't nalbind this or you shouldn't do that because the Vikings didn't do that, it's a very common response to anyone who wants to make something more than small accessories. So they ask online 'can I do this?' And it's very often the response they get 'you can't do that because Vikings didn't do that'.

Emma: Like you say, Nele, that's an accessibility thing, isn't it? I think there's a language that needs to develop around nalbinding in many, many ways. Folks need to just be given the right information to be able to be like 'okay, well, if you would like to reconstruct a pair of Viking-period 10th century socks this is how you do it historically'. But like you say, if you want to interact with the Oslo stitch or the York stitch or any of the more complex Russian stitches or Finnish stitches, then feel free, make what you want. Go at it from an artistic and a craftsmanship point of view, use your creativity and engage with it in that manner. Every place definitely has a home in nalbinding, and we can hopefully continue to be the people that are helping to support and encourage people to do that from different angles and avenues.

Nele: It's also very important because..., of course, I speak from a Finnish perspective that it's a living tradition here and crafts only stay a living tradition if they are practised and if they are evolved, if they are meeting the criteria that the crafter today needs... It's one of those things that if we look at the Jorvik sock, which has 36 rows per 10 centimetres - if I remember right - or the Kaukola fragment, which has - I haven't actually counted the row height - but it's also similar to that. It's a really, really teeny tiny rows. So if a person doesn't need to make a replica, it's completely fine that they have 4 rows for 5cm, so 8 rows per 10cm, and that they make plushies, and they make sweaters, and they make cowls, and that they make holders for their teacups and all of that. So the craft is only alive and well if it is fitting to this day. If it's only looking back, it cannot look forward at the same time, and it cannot be keeping going forward if it's just looking back.

Matilda: That is a fantastic quotation to wrap up on, I think, and ask a final question of you both, which is: what are your plans for the future, any exciting projects coming up or anything else that you would like to let people know about? And also, how can people who are listening in, either from the EXARC community or from elsewhere, help to make any kind of difference in regards to those points that we've discussed today? Perhaps Emma, if you want to go first?

Emma: Okay. Now being a member of the University of York's archaeological department, I'm hoping to blow the can wide open on nalbinding research from a UK perspective...,

Matilda: It will become the York University of Nalbinding Research!

Emma: Yes, yes, we're going to go right in there and we're going to give it our best shot. I'm hoping very much to be able to liaise with other academics, not only within my department, but also around the world and start having more discussions about this craft as an ancient world craft and its different cultural forms and variations. So yeah, the upscaling of the academic side of nalbinding is very much on my radar. And as I alluded to a little bit earlier on, I'm going to be writing a series of articles upcoming in relation to the different cultural examples of nalbinding that we have from the archaeological evidence and just try and get that data in a more accessible and organised format so that others can go off and research or it provides better discussion for this craft as well. And of course, whilst I'm not at the university doing research, I will be running my nalbinding business, Nidavellnir, where I create nalbinding for beginners resources. I'm looking to develop other books on other stitches and other ways of nalbinding for people to interact with so that they can learn it, from whatever point of view they would like to learn nalbinding from. And just keep on making items for the reenactment community, so folks can actually see and touch and feel these lovely items that are made from nalbinding and garner a better appreciation for this craft, too. So, yeah, much, much to be a-doing, I think, in my upcoming time frame.

Matilda: Indeed, thank you. And Nele, how about you?

Nele: I'm just hoping to finish the thesis sooner than later and see from then what are the possibilities. As I said, it's important to keep the craft alive and keep the craft developing or evolving to meet the modern criteria and also that there is accessible, if not patterns, at least materials to learn the craft and learn to how to applicate it so that you can actually do the things you want to do with it.

Matilda: That sounds great. We'll be putting all of the links, for example for Emma's shop, for the resources that have been mentioned, we'll be putting them all in the show notes somewhere. Thank you so, so much, to Nele and Emma for joining us today and sharing your experience and your expertise. I definitely learned a lot. I learned far more than I expected to about nalbinding. So hopefully our listeners have as well and we've inspired some to go out and try and keep the craft alive. And thank you everyone else for listening to this episode of #FinallyFriday by EXARC. If you would like to become more involved with EXARC, you can always become a member. Or if you would like to first just check things out a bit, you can also join our free community Discord server where, for example, we also host our brand new working groups, for example, the textiles group coordinated by Nele.

Join us next month for another episode of #FinallyFriday and learn more all about the world of experimental archaeology, ancient technology, archaeological open-air museums and interpretation. Don't forget to follow the show through exarc.net and our associated social media channels. See you soon!