Google Hangout on ethics

UNIVERSITY OF Southampton

Discussion about ethics in relation to Maritime Archaeology

The panel (L-R): Esther Unterweger (just out of shot); Dani Newman; Helen Farr; Julian Whitewright; Crystal Safadi; Ian Barefoot; Geoff Downer; Peter Campbell; Fraser Sturt)

Streamed live on October 30th 2014.

Fraser: OK, hello, potentially lots or few people – we really don't know who is out there. So, this is the Shipwrecks and Submerged Worlds MOOC discussion about ethics and Maritime Archaeology. We're going to begin by a slight apology in that we do have other people on the other side of the world who are trying to join in but our technical capabilities are slightly letting us down, so Paul Johnston and Alexis Catsambis over in the US are waiting poised to be integrated, but we may have to take their comments via email and Twitter. We'll try and get them integrated, so do please feel to ask questions either via the YouTube channel or via Twitter and we'll answer them. We also have a stock of questions that have come in via the FutureLearn platform. So, we're just going to begin by introducing ourselves and then we'll

think about beginning the discussion around the questions, which were posted on FutureLearn.

So, my name's Fraser, it's very nice to meet everyone online.

Peter: Peter Campbell.

Geoff: Geoff Downer.

Ian: Ian Barefoot.

Crystal: Crystal Safadi.

Julian: Julian Whitewright.

Helen: Helen Farr.

Dani: Danielle Newman.

Esther: Esther Unterweger.

All: (laughter).

Fraser: OK, so the first question that we posed on the FutureLearn platform I'm just going to read off Peter's laptop to my right, so I'm not ignoring you all:

> **On the assumption that the best archaeological practice is pursued and any artefacts that are recovered are kept as one collection is it legitimate for shipwreck excavations to be privately funded and privately housed?**

Really this touches on a couple of really related issues to do with the practice of archaeology and some core principles that underlie what many of us would see as archaeological practice. Now just as a caveat at the beginning there is an important distinction to be made here between legal and ethical and legal obviously relates to the varying codes of law around the world in different countries and what is legal in some situations can be very different now. Law prescribes one set of practice, but different groups of people subscribe to different ethical codes as well and many of us here will be speaking from an archaeological point of

view, which has a particular stance with regard to material culture and shared heritage and this influences our views and we're very happy to debate that, so when we talk about right and wrong this is often from an ethical standpoint which we would take and are happy to explain that may not coincide directly with a legal standpoint. If there are any questions about that, do feel free to ask. So, what do people think about funding excavations (because it is a challenge) and private collections?

Peter: Well, I'll hop in there and certainly it's one of the big questions - how do we fund archaeological projects? There have been 'for profit' models, but by and large they have not gone very well. None of the 'for profit' projects have done particularly well in terms of what we think about when we talk about archaeological ethics.

Geoff: I think it's a very interesting question in itself, but the question specifically about should a project be privately funded and privately housed. I think it depends on what privately housed means. Actually, I don't have a problem with it being privately housed and paid for by a small admission fee if the public has access to it. But being privately housed - locked away somewhere for someone's private gratification - doesn't seem right to me.

Fraser: I think that's often the key thing a number of us would pick up on. It's about access and keeping a coherent collection of material which is fundamental here, so private funding is welcomed in many respects in terms of helping if it's about releasing and promoting sort of scientific investigation but the removal of materials into private collections when the term 'private' is about off-limits that's I think, where many people become concerned because that's acquisition rather than curatorship in some respects.

Helen: I think as well that seeing as we're talking about private acquisition we're creating a monetary value to the objects as well so that begins to get us into the problem that you're creating a market for these things and I mean, obviously one of the UNESCO rules was that Cultural Heritage shouldn't be commercially exploited, so we've got to bear that in mind as well.

Dani: It's a bit about the legacy of the collections as well and sort of how long a private ownership can exist and how long an individual or group can sort of say it will they will be able to pick stewardship of an object and just because one group says we'll be able to build

the house, be able to provide access for academics and for the public to see it doesn't mean that that is always going to be the case I think one of the other big issues is if it's being, if a project's being, privately funded with the intention of recovering artefacts for private use, at what point does the recovery of the artefact outweigh the value of the archaeology itself? Because, at the end of the day, the artefact is a lump of metal or a piece of wood, it's the context in which it's found, within the site that's important, that's what tells us about the people who were there who created whose sad loss possibly created the site so where do they disappear into the financial loss, if you like. Or the financial background? That to me is the worry.

Peter: Yes and certainly, so I'm from the American South where in the 1950s and '60s there was a rash of excavating privately excavating Civil War vessels and creating public, sorry, private museums to house them and the cost of underwater artefacts - preserving them and storing them and putting them on display - is enormous and what ended up happening in many of the cases there is that the public had to take over the burden, the financial burden, and the care of it and open public museums to house them and it ended up costing a fortune for the public.

Julian: What did the public think about that?

Peter: They were not happy!

All: (Laughter)

Peter: In fact, on a number of occasions they tried to burn the shipwrecks to destroy them so that they wouldn't have to pay the financial cost. Some were buried and now there's an overpass over one in South Carolina, so I mean in some cases we've lost these ships forever just because there was no long-term plan for the conservation and stewardship

Ian: I always told divers, [I talk to divers and I am one], The way I always phrase it to them is, 'Look that piece of metal sitting on the seabed might be wet, cold and slimy, but it's happy down there You bring it out and, with the best will in the world, take it to a museum curator you can watch the museum curator's face turn into a cheesy grin as he says or she says, 'Thank you very much', but, at the back of her, in the thought bubble over his head there is

'How much is this going to cost the museum?' Leave it where it is, tell somebody about it, but leave it where it is.

Geoff: Unless where it is of course it means it ends up being dredged up and thrown away by fishermen.

Ian: There is that to it.

Peter: It is a delicate balance

Julian: I think there is also something within there about who the ownership of the shipwreck is within in the first place in terms of the private or the public funding and the accessibility of it if it's deemed to be a site that is of you know, public value and it's being preserved for the good of the public they might not think it's for their good, but you know it's there for them all of the ones we have around the UK and people are working on those then there's a duty that that should always be publically accessible I think, anyway.

A moral duty?

Julian: I think both. And there's a huge amount of work in that's gone on in Britain that is all in private collections, but those private collections are publically accessible either sometimes for a fee paying museum sometimes by arrangement but there's a lot of different scales within and equally there's a lot of work which has been carried out by public bodies that have been publically which is publically inaccessible

Fraser: I think that's a very good point and that brings us on to we've actually got a question which has come in online which says: "Although I don't agreed with illicit trading and treasure hunting the searches that have been carried out by treasure hunters the searches that have been carried out by treasure hunters in a way provide substantial research and discovery otherwise not possible by scientists." I think this is an interesting question because it is one that gets asked a lot and I think there's variability because there is a baseline. The more surveys that are done the ocean's a big place, the more sites are found. There's a difficulty here in that actually we're seeing increasingly large amounts of off-shore surveys done for a number of purposes - off-shore construction and so on - which are often integrated with archaeology and in a very close way, so I think the argument that treasure hunting brings a

huge resource to maritime archaeology that isn't there otherwise I'm not convinced at how legitimate that is in terms of the total area surveyed.

Julian: How many submerged landscapes have treasure hunters discovered?

All: laughter

Fraser: I think that's a very… I'm obviously very biased and for me there is no treasure in terms of the broad… for much of the periods that I'm interested in the science approach to it But even with the wrecks, I honestly don't know the search areas considered, data released and contribution to wider scientific knowledge, if that's the argument to be made, through that treasure hunting and so I think it's an easy argument to make but one that's very hard to back up with actual quantifiable data about improvement of the knowledge base in terms of total area.

Dani: I think for me part of the problem is that there's just, there's a lack of communication, and so there's a lack of knowledge about how much, how much treasure hunters could know and how much people have discovered that they're not they're not sharing so it's a case of while we do know some things have definitely been found how much has been found and not reported. That's the difficulty.

Peter: Unfortunately, we just don't have really good figures on any of this just as far as there actually are not that many treasure hunters out there. There's very few firms, both public and privately owned, whereas you have state and regional archaeology, whereas you have state and regional archaeology, you have commercial archaeology… if you were to look at a regular average run-of-the mill commercial archaeology unit they're running out and they're recording and surveying you know, vast amounts of shipwrecks per year. You look at most treasure hunting companies and they're looking for one wreck specifically, maybe finding you know one or two a year. They're doing a very small amount of surveying and recording compared to, you know, your average commercial archaeology unit. Compared to, you know, your average commercial archaeology unit.

Dani: But what are they finding that they're just not interested in and not saying?

Peter: For a specific wreck, they may find other stuff as well.

Helen: I think, also, which skews the public opinion of what is going on in part is because the treasure hunters are looking for the 'glory wrecks', so the famous wrecks with perhaps the bullion and things like that the really famous ones so of course, when they do find them, it hits the press and it becomes spread around media and so more people see it - it's more visible. Whereas quite often commercial archaeological units are doing really good work - they're recording important historic shipwrecks perhaps scientifically important but they're not necessarily going after those really 'glory' finds, so it doesn't necessarily become international news.

Peter: Right. The ship graveyards surveys that record 60 or 10 wrecks don't get reported in the media whereas, you know, the search impossible discovery of one treasure ship, you know, goes across the…

Julian: It also goes back to that question, think of some of the work that has been done in the Mediterranean where huge amounts of the Mediterranean seafloor and the Black Sea have been systematically recorded with the same state of the art kit that a treasure hunting company might be using stuff like RPM's work at the ???orcady island???

Peter: Yes, yes, 250 square kilometres of - all deep-water shipwrecks

Julian: 1600 years old, the masts still standing. Phoenician wrecks off the Levantine coast, there have been plenty of unsuccessful works that have been done as well, so it is happening and it is happening in a scientific context by people who are really well-funded.

Helen: I think the difference is there's been a huge development in technology which is now accessible by archaeologists through collaboration within the industry and before up 'til maybe a decade ago it actually was the treasure hunters who were privately funded who had this deep-water investigative equipment. They had access to AUVs and ROVs and were able to get down there, whereas now today if we want to get down there we can also get down there, so the gap has really closed.

Peter: And not just through industry, private organisations and universities: University of Malta, Woods Hole with Ballard's work, RPM, These are purely archaeological groups surveying massive tracts of seafloor systematically.

Helen: Yes.

Geoff: In the case of places like Woods Hole, industrially funded in fact…

Peter: Well yes, some of it is.

Julian: If you go back to the work at ??? What was that? 1982? That is deep-water wreck ages before anyone was doing it in that sense with the ROVs. It just wasn't pile of bullion on board it was a pile of dress and 2-4 amphora

Fraser: OK, so we've had another interesting question - you're firing questions in at appropriate times as we're having discussions, so this is good – saying:

> 'Land-based archaeologists have had to deal with metal detectorists for a long time, is there anything they managed to do to find compromise that might work in the maritime discipline?'

And again that's interesting, perhaps contextually relevant to Britain, in particular, where we have something that is called the Portable Antiquities Scheme. Here this has generated a huge amount of data from metal detectorists working in ploughed fields which has sort of revolutionised our understanding of distribution of particular kinds of artefacts - obviously, metal artefacts - and extended our knowledge of them, in part through sheer weight of number of people being out and it has established a framework where that knowledge and that material can be taken to a local expert and it has established a framework where that knowledge and that material can be taken to a local expert. They will appraise it and say what it is, when it dates from, enter it onto our Historic Environment Record and fill in a report so it gets properly accessioned.

In some ways offshore we have the Receiver of Wreck in this country who officially takes that on. Items that are recovered, they have to be declared back to the Receiver of Wreck. It's not geared up in the same heritage manner and is an unfortunate - in terms of heritage perspective - view about the monetary value of items. It's more difficult off-shore in that there is and divingwise there is a link in terms of people can report material that they find from wreck sites and so on, but it doesn't feed through in the same way and principally, I think, it's because of the nature of the things you find. When you're metal detectoring across the

surface, it's a bit like having submerged shipwrecks and your equivalents which would be just lured by material on the surface and you're picking off a little bit and going, "Oooh, I found something!" There might be something more significant. Whereas when we're working with other forms of offshore salvage perhaps might come up against these things. It's a different order of magnitude in terms of investment and recovery. So, I think, on the one hand the Portable Antiquities Scheme has been great. I really think it's added a huge amount to our understanding and it would be really good if we could find a similar way to engage people, but perhaps with the look, record things with a photograph and show local specialists what you found and have that data entered that way. Because then there's still the engagement, improvement of the record, and for many metal detectorists its about the enjoyment of discovery and we can participate in that and also think about how we can use it to add data without leading to degradation of the site.

I think one of the problems is that I've worked in commercial archaeology companies with metal detectorists on discrete sites and they're actually very useful.

Ashamed to admit it, but they do tend to find the tiny coins that the diggers have missed when they're in the spoil heap. The big problem is the underwater world, if you like, is it's very much a hidden world to everybody except a diver and to a certain extent it is discounted by the 'powers that be'. What goes on under there isn't visible to the general public, therefore, don't worry about it. But of course, we're losing resource. It is quite possible for a diver seeing an artefact to take a rough notes of its location and report it to English Heritage and it goes on the but that knowledge resource is actually quite difficult to access because a lot of the terms there are done in 'archaeology speak'.

Fraser: I think that's a really good point. It's been one of the really nice things for us doing the MOOC has been the level of interest It's been really good to engage with this many people about a topic which you'd think only interests a small proportion of people but it's been thousands of people interested in shipwrecks and archaeology and I think there is something that we have got to do about democratisation of knowledge, and engagement with people. So yes, you can use our favourite terms of 'citizen scientist' and waving hands and things like that, but I do think Ian's got a really genuine point. I think it's a more difficult thing when we talk about protection of heritage that is less visible. It is easy with a barrow or an

upstanding monument on land, to help people make awareness of it, but it is remote from the vast majority of people and we're asking for a considerable investment in some ways and leap of faith.

That said, I'll say, hand on heart, there has been a sea change - excuse the pun - in both. There are now a lot more white metal detectorists than and similarly with divers when I started diving in the very early '70s, I didn't bother with a weight belt because I had a sledge hammer, cutters, everything else... and I was down there with the rest of them. Now the ethics have changed in dive groups. I have no doubt about that. Now I know one person who will still take bits everyone else is there on the 'look, don't touch' basis, and I think that's brilliant. What we need now is 'don't touch, but please do tell".

Peter: Do you think that's somewhat related to the Nautical Archaeological Society and the training that people get there and its influence?

Ian: Geoff and I would certainly like to hope so. I think that it's partly the training relatively few people in numbers terms and it's quite a small operation overall in the UK and worldwide, possibly even smaller, but I think, what is very important and the big benefit of that has been the way that the diving industry in general and the magazines and so on have been Nautical Archaeology Society so much the people who are actually training members as we are of it the wider diving world see it through the articles and things it's more of interest to them. Diving organisations as well - BSAC, PADI - they're all much more ethically focused now. I mean they've always been ethically minded, but I think there's a difference between minded and focused. And it's the ethos that's changed generally and I think that's come from multiple directions. I think one of the things probably is television with the archaeology series that have been on there. It focuses people's attention on Widely considered that Time Team has had the biggest influence in the UK for all its faults, as we see it,

When I came to this university to start my BA I was a member of a class of 45. I was one of the seven mature students and most of the rest were there because of Time Team.

Fraser: I think we, sorry were you going to say something, Helen?

Helen: I was just going to say that it's definitely this question of education, which is going to make the difference, and it's not just through archaeological bodies, but the dive bodies

themselves are... PADI for example... are doing their wreck courses now and it just helps people be more aware of what they're looking at and how to deal with materials with its bounds and it been recorded before but not just the diving community. What came to mind were the trawlers in the North Sea and there was a really successful programme which gave these little classes to the fisherman to tell them what to look out for in terms of actual Pleistocene forms of material from the submerged Doggerland and Doggerbank which was just being trawled up every time they went out they were bringing tonnes and tonnes of remains up out of the North Sea. It was just being dumped, because no-one knew what it was or how important it was but with forms that went around and lectures that went around suddenly the fishermen were coming in and they were filling out all these sheets and things and could actually pinpoint exactly where material was coming up so divers and maritime archaeologists can go back and they can survey and hopefully, possibly, pinpoint whether there are sites and things like that, so at least it is all being recorded and it isn't just being brought up and then thrown away so that's another example.

Ian: I think that's common, I mean, even in historical archaeology I think, if I remember rightly, the ??? site was actually found because an antiquarian went down there and asked in the 1800s and said "Are you finding any unusual stones?" And people said, "Oh yeah - we find these."

Fraser: It's an amazing resource. Dr Rachel Viner, as she now is, recently completed a PhD here looking at this and there was a phenomenal record in the museums of things which people handed in because they didn't have this interest. They recognised the value from the early 19th century onwards and there was a period of sort of disinterest where it went away and then the re-education that Helen was talking about is really driving it again, so you could have read that data as that it all got dredged up and the sea was bare and it stopped in about 1960 but actually it was just sort of a shift in interest and then as soon as you start asking people again then it's back again… and there is a richness to the material so I think it goes on. One is as an amazing resource sat in museums but secondly, there is a real power to, well to, enabling people to recognise what they're pulling up.

We have another question: which sort of ties in again. Which is some of these reasons from Hurley Books saying:

> 'I know divers that jealously hoard the locations of wrecks because they don't want others to come and share it'

but actually an example from *Colossus* - another wreck - is a good example of sharing and learning and I think this is one of the things that we push is that it really is that change in how you value something which is really important shifting it from a monetary value or an exclusive value into wrecks that you don't know, to one where it's through the process of investigation that you gain additional knowledge and that that is where the significance of these materials lie and their potential does. I think again this is where the diving agencies have actually really pushed this because there is a whole diving with a purpose has become one of these key elements and if you think about the potential, the number of divers out there and the work we could do, it is just phenomenal.

Julian: that comes back a bit to the question about the methods etc. think we've had a… maybe because it was the advent of SCUBA and all of the sites that that has uncovered but that was akin to people going out and…

Fraser: Well, that's my favourite, I may have said this before now, but that's my favourite story for the empowerment of people is that we're saying that, you know, everyone focuses on shipwrecks and I'm always dragging it towards the submerged worlds angle, but if you look at the discovery of a lot of the Danish submerged worlds they came from this public call for people to find an early site.

Exactly, in the 1950s, and we would do this differently now. We wouldn't ask people to just pull it out we'd ask them to leave it in situ but we'd the knowledge base that helps to generate has left a legacy that people are still working on today, so that is one moment of getting everyone engaged and you can really see why globally this has a real potential in terms of a shared resource because there are lots of people who now dive and there are now lots of wrecks in different places that are accessible.

Dani: I think in the UK it's also it's really important to acknowledge the benefits to the licensee programme and how that really allows avocational maritime archaeologists to do some incredibly professional work. And to really have access to sites and it's wonderful that the local divers are able to work on sites that they love and to contribute to archaeological

knowledge of them and they get support from English Heritage to be able to build their skills and to just help their knowledge

Fraser: For those of you who may be in different parts of the world that don't know we have a system where our protected wrecks are given a licensee who is responsible for monitoring them and this can actually anyone can apply to be the licensee and forward that application and that enables them then to carry out the they can apply to do survey work on it and non-intrusive works and in very rare cases if intrusive work is justified and it has been a long-standing idea of engaging people I think there's ways in which we could push it even further really and think about as Julian said, drawing the thread from discovery to the excitement of being engaged all the way through to dissemination because that's the other issue...

Julian: That's where the system stops.

Fraser: It is. It's where we all struggle. Everyone struggles. The joy of doing it, but also the importance of saying that it's not enough just to find the things or to recover them, the really important thing is that documentation and release of opening up of the data as well There is an accumulative study in archaeology.

Peter: And there are divers who keep sites under wraps, I wouldn't necessarily say 'hoard' but they keep things hidden from the general public and from other divers in order to protect sites and certainly in the caving community it's very important that people don't want to see caves destroyed or disturbed or looted, and so they keep sites to themselves and so there are groups that agree to map caves and to tell them what they've been finding and that sort of thing whilst keeping the locations confidential For the sake of natural and cultural preservation.

Dani: It's also a safety thing, isn't it?

Peter: Yes, absolutely. Yeah. A fatality greatly affects the entire cave-diving community.

Julian: That happens in land sites as well. There have been a number of hoards in this country that have been unearthed, excavated, all the work's been done on them and then it's been six months before they've been publically made visible just to stop people or discourage

people from digging up the field for whatever else there might be there. Within the PIS the finds location officer is quite entitled to mask locations of the site.

Fraser: And we see this across the world different countries have different approaches to this in terms of whether it's possible to release locations of wreck sites for very good reasons and this is, there is no, hard and fast rule, I think, and this comes back to this issue about ethics and management and how you can control it and different countries have different approaches. Some take an open responsibility approach and this is what we see as an appropriate response and others take a more protectionist stance and say once located we'll either obscure the location or physically mark them so that you're not allowed within these zones and this is why it is complicated, because there is no single answer to how you should ethically approach things. We have our ideas and our arguments to support them or ideas of value as well and this is why I think it's important that the discussion is had and very openly about this because it will differ but we have to be able to put forward strong arguments which people can then decide what they think about.

Oooh - we have another question.

> 'So is there an organisation that can make decisions if a site isn't a site of archaeological interest? In the Mediterranean we constantly find artefacts and often we don't know if the artefacts are important. We should have a website to upload images to evaluate.'

Absolutely, yeah, or a national heritage. So that is a really good idea and a really good question. What do people think or know?

Peter: Certainly in most countries there is a central repository or even in regions. So in the US you have state archaeologists that are the central repository and people can go look at their records or request records and they keep track of everything that is found. In Greece for underwater there is the underwater antiquities and in Albania there is the coastal authorities. So most countries have a central repository where divers can report finds and where they keep a database.

Fraser: I think, it is the same too, isn't it? Yes. And I think it, I think you raise a, I think it's a really good idea and it's a model that some of us would probably go for where an open

accessibility to upload and share and very rapidly because then you could also have photographs of materials in situ which is what a lot of us would like. So you could take a photograph and say this is what I saw and this is where again you hit that buffer between a desire for openness, which I think a lot of us would hope for, and the competing concepts of value, which come with it. So how do you cope if you've found an amazing cargo of Majolica or something like that which has a value in a different economic sense as well? So, I think it's a really good question and Peter: And the fact that you haven't heard of these websites or organisations wherever you are based kind of speaks to how archaeology and governmental agencies need to communicate better that these facilities exist!

Julian: What you do when you find something. You shouldn't have to resort to Google!

Ian: It's also a very interesting question and very timely because it's the example of where technology is helping the amateur diver because with the advent of the compact camera that a lot of us have got now it is really very easy and really many more divers can take very good digital photographs of things they find. It actually speaks to the previous discussion we were having because I'm not saying it's right or wrong butt it's entirely possible to take the photographs, upload them to a site without revealing where the site is they took the photographs

Fraser: Yeah, absolutely.

Ian: Yes, if they wish to do so. Quick plea though - please put something in it to act as a scale!

Fraser: No, I think that's a… Yeah, I think there's an awful lot in that as a potential, I mean there's also a huge amount that could be done through time with a crowdsourcing of underwater imagery as mapping. Now that we've got increased computational power to do these things, so actually, there are lots of different routes where I can see us engaging the diving community more broadly in heritage research and so I think it's a really good idea but it's one that would also… it has to overcome those issues of local practice and policy really and it does vary and there are different cultural sensitivities to things, so yeah, a very good idea, I'd say. Do follow up.

Peter: We have a great question from Laura via FutureLearn, who asks,

> 'What do you think about reburying archaeological wreckage when a country's institutions cannot guarantee proper preservation?"

So in Buenos Aires there is an ancient Spanish trade ship that was found when there used to be a river, but it silted over and it was excavated and they hadn't, they didn't have the funding to preserve it properly and put it in a museum, so it was then reburied in a different place. So what do you all think about that approach?

I think, personally, I think it's perfectly sound approach, provided it is buried in an agreed place, which won't subsequently be built over.

Ian: And also, it comes down to an ethical issue. Who decides that that particular country at that time is not capable of looking after its heritage? We've had examples in the recent past - Iraq and Afghanistan - where we know archaeological sites have been threatened or destroyed [?] is probably the best option that many countries have Nothing can be done about it, but at the end of the day, who is standing outside saying, 'That needs to be buried.' and also has the legislative clout to do it.

Dani: I think certainly lots of countries internally decide that they just can't deal with the shipwreck because as Peter said, the cost of conserving it, and the cost of making it accessible to the public really is too much for lots of countries to be able to deal with. In those cases - certainly detailed recording of the shipwreck - [re-?]burial is probably the best option that many countries have

Geoff: It's certainly better than destruction, isn't it?

Dani: Absolutely. And it's certainly better than taking it and watching it rot away.

Ian: And English Heritage will tell you it's the preferred option here.

Julian: I think there's a slight difference, isn't there between just preservation straight in situ, and other recovery, recording and then re-burial for the purposes of conservation.

Fraser: Absolutely, I think that's quite different.

Julian: That's the important difference to make.

Ian: One answer with smaller artefacts for countries where they're under threat is send them out as a road show, as a permanent travelling exhibition. That a) keeps them safe, and b) can attract finances in for on-going conservation.

Fraser: I think it's something that could almost be seen as heretical, that you can say as well in this situation, is that not every shipwreck needs to be preserved for posterity once excavated, recorded and documented so the concept of preservation by record in archaeology is quite an established one that's what we do with terrestrial sites - once they're excavated, they are gone - and I'm not saying that in every situation this is acceptable, but there is actually a value to these materials as a learning aid that we can sometimes take on that we don't have to preserve for perpetuity every frame and ships timber so we don't have to always be able to conserve forever there may actually be a justifiable reason for excavation, recording, in detail once that process has finished, removal and making it accessible as something that people can interact with or learn from as well. So, I think the two things - I think it's a very complicated chain. I think preservation it situ demands - [phone rings] Oh! I think we might actually have succeeded in something there. Or is that you?

Peter: I think it's a separate call.

Fraser: We're obviously very au fait with the technology here, you can see. So yes, we should apologise that we've failed to integrate our other hangouts or hang-ees, whatever the term is! That doesn't sound entirely right, does it? But we will include them in the conversation in terms of answer to questions and so on. Paul and Alexis, we really are thankful that you provided the time for this and we're really sorry that we haven't been able to find the button to press to include you, and sorry to everyone else who's watching this because it would have been very good to have their presence.

Peter: They are commenting - so Dr Alexis Catsambis is a maritime archaeologist with the US naval command and in this whole discussion he pointed out the USS Westfield, which was excavated everything was recovered, it was fully documented and studied and subsequently all diagnostic artefacts were conserved and [] non-diagnostic artefacts were re-buried in a

similar waterlogged environment. So that cut down the cost of conservation and also people can go back and find it later if they need to look at any of the non-diagnostic artefacts

Ian: Well, to a certain extent we've done that here of course with the Gresham ship.

Fraser: Yeah, absolutely.

Ian: She moved from a car park where she dried out in 6 months to the Navy's - or the joint services - diving school where she floated until we dropped an anchor on it but she's now actually in the diving centre at Stoney Cove in Leicester and anybody who wants to see a Tudor period merchantman is more than willing to go and look at her.

Fraser: And I think that's it, it's that sliding scale of things that we encounter archaeologically and some of the different things they can contribute once excavated, so I think it's true so I don't think equally archaeology should be painted in the light of people that always want everything kept in aspect and preserved because actually we're on the reverse, we're actually very keen in the recovery of information from these things so investigation, destructive investigation even, is a really important part of what we do but it's always with a justification and a plan as to what happens next. So the example Alexis gives of removing and then thinking about how you conserve a whole which is complicated but by placing it back in a comparable environment is a really good one because that's about removing objects which can be conserved and studied relatively easily it does leave it open to an element of further interpretation at a later date I mean, it's happened with land sites, like Butser. They were dug in the '20s and '30s, reburied, and now they've been re-excavated and new information, because of new technologies, comes around So it's a great idea, it can just sometimes be frustrating.

Helen: And this ties quite nicely, actually, to a question we had by Twitter earlier today about whether people have sunk material to study degradation and actually the answer to that is yes by reburying, what it does give us, is the opportunity to study degradation of material and the site formation processes which help us think along the line, understanding conservation and also understanding how we can recognise sites because of, for example, things like scour pits, and things like that, in the future so it is really important and it's part of continuing the knowledge that we get about these underwater sites.

Julian: We have a question via YouTube.

Fraser: Oh, we do, yes.

Peter: Just one more thing. Alexis and Paul are very eager to contribute. So sorry that we can't pull them up, but just a bit more on the Westfield project. Alexis says that it was a mitigation project, which means they were widening the Texas ship channel, so it had to be removed or else destroyed and he says that by non-diagnostic, they mean there are hundreds of small metal fragments that have no features or anything else, no inscriptions and so all those extra bits were then buried in a similar environment to preserve them.

Ian: I take it she was a Civil War ship?

Peter: Yes, American Civil War.

Julian: This is one for you all to get your teeth into, from Robert Smith:

> 'The panel complains about artefacts in private collections not being seen by the public but what about the masses of artefacts in museums that are documented but never on display. How about selling them off to raise money for new exploration and research?'

Fraser: It's a really good question, and it's tied into a very complicated – well, not a complicated issue – a relatively straightforward one for museums, is that very few museums can actually do that even if they had made a decision that they would do that, they take on a responsibility to care for those objects Now, it is interesting that there is a tiny percentage of material that's in museums that is on show and I think it's a very fair thing to say that it would be good to be able to do more of it.

Julian: You can see if it you ask.

Fraser: Bang on the door and ask. Exactly.

Geoff: If you know it's there in the first place.

Julian: Now you get all the catalogues online, so all the stuff that's - say, Greenwich, for example, all of their catalogues of ship plans are online And they're available, most of them

are digitised you can actually whistle them up electronically, so it's hard to know that it's there, but it is more available than it was ten years ago.

Peter: I was just going to say that museums weren't designed to be a public - a weekend trip they're designed to be repositories, so what they show is actually a very small percentage 10% or less - in some cases 1% - they're archives, so as public institutions you can go and request to see any of the artefacts just because it's not on display, doesn't mean that you can't ask to see them. So they're designed in order to - on the one hand, draw in the public, but the vast majority of their budget and people working there and everything else is for - as a repository, as an archive.

Fraser: Yes, I think that's something that doesn't get pushed enough because they are fundamental in terms of archaeology as a practice in archaeology, we need these archives for comparative purposes and they're a really substantial investment, but a fundamental tool for what we do, and it's taken a long time for us to build those up, and it's hard to over-estimate the value of it.

Dani: I think it's also important to remember that museums change their displays and that just because something isn't on show once doesn't mean it will never not be on show and that's one of the brilliant things about going to museums There are some museums I've been to probably dozens of times a) because so they're so vast, and b) because there's always a new show on, there's always new objects on display and that's one of the things that makes them so interesting and so wonderful for viewers.

Fraser: So just very quickly, on a slight side tangent, but to go back to the re-burial question Hurley Books asks,

> 'Do you add something to the re-burial site to let future archaeologists know that this an anomaly?'

It's a very good question, and I think it would vary in different parts of the world nearly anywhere I've heard of it would have to be, because you're introducing a potential shipping element that would normally be recorded as an activity and either a hazard or a feature on the seabed floor but you are right, you could possibly imagine situations where it would be a confusion, given enough time

Ian: Nowadays of course, in the UK, the marine management organisation would have it on record.

Fraser: Absolutely, but you can imagine the time depth we have - give ourselves a thousand years and changing recording systems - the difference between ourselves and the Romans etc. etc. - and you could see, it might be a puzzle to someone but hopefully archaeologists of the future would be interested in, why did they do this, and how effective was it? So, not a stupid question, a good question.

Peter: The general practice is to lay the geotextile, or something modern, at the lowest point So any time you add something to the environment, before you add it, you add something down below and any time you dig a hole, you put something like a 2014 coin down there so that people who come later know that archaeologists were there and changed the site Good question!

Dani: I've also been on sites where everybody involved has signed the bottom of a rock and put it at the bottom of the [], along with an apology for getting their first! So –

Esther: We leave a trowel

Dani: Yeah, yeah.

Geoff: That probably wasn't planned, though!

Esther: Sometimes on purpose.

Fraser: In fact, actually, there's a very long archaeological history of this Pitt Rivers, one of the early archaeologists in Britain, had his own medallions cut that he used to place in the base of his excavations and it's always been a dream of mine that some time I'll find that he was there before me but there you go.

Peter: We have some more questions.

Fraser: We do. What was the second question on the FutureLearn? OK, so this sort of ties into the first question we picked up, which - this one was posted on the site saying,

'In an attempt to raise revenue to fund maritime archaeology projects, would it be ethically right that the artefacts recovered from shipwrecks, for where there are duplicate examples, once all originals have been thoroughly recorded and conserved, being loaned out to the general public for a fee?'

It's a –

Julian: - classic question

Fraser: It is. What do you think Julian?

Julian: I don't know. It's a really, really difficult question. It has happened in this country, in Britain, HMS Invincible, which was one of our protected wreck sites, was excavated in the 1980s and they found a huge amount of the ship's stores had been preserved on the site and were raised, and a selection of them was sent to Chatham and put in the museum there, and the remaining duplicates and everything were sold off after they'd been recorded so, there are precedents for doing it in Britain, within a system of licensees run by the government on protected wreck sites but it's still a really difficult thing, because your approaches may change in the future and we might want to go back and look at all those things from a different perspective but we can't because that archive has been dispersed. But, then you could say that by selling off those artefacts, they were able to continue the work on the site, which wouldn't have happened otherwise, and we've found out more information because of what has gone on.

Ian: The other end of this actually goes hand in hand with the CITES legislation, the protection of endangered species The argument there against legalised sale of ivory is that it will act as a cover for the illegal sale of ivory and if you are getting artefacts purporting to come from one shipwreck on sale, there is absolutely - or, it's very difficult to stop it being artefacts from another shipwreck, and will just encourage looting

Fraser: I think that's a really strong argument. I think as an archaeologist keeping completely out of adding any monetary value to cultural heritage, it's a very important part of what we do, because this argument's been around for a long time now in terms of what we should do, but by enabling any form of added value to be given to this material we feed into that market because you drive those economic levers, really I think the question was asking a more

complicated thing, in that it's saying, is it OK for these things to be loaned out as display articles, and to charge them? I mean, that might - I don't have a problem in some ways, in terms of if collections are maintained, managed –

Julian: So we're keeping the artefacts together. Because it comes back to this idea of commercial exploitation. Well, we're commercially exploited every time we go to a museum and pay money to get in there, you could argue.

Fraser: Exactly. But if you're going in just to look at the collection that's on display then you have to pay.

Geoff: Even though you've paid for the museum through your taxes.

Peter: That's very true, yeah.

Fraser: And that was a very interesting thing here when a number of museums became free, it was very interesting to see the impact in terms of changing use of museums it was very good Peter: Well, actually, real quick. So Dr Paul Johnson at the Smithsonian, who unfortunately is one of our experts who is not appearing on the screen, he says that this public loan of artefacts for a fee was actually tried in South Carolina in the US and it didn't work unfortunately because people moved, and they died, they lost interest, and some people were robbed. So it simply didn't work out, unfortunately.

Helen: I guess one thing to think about is the question of insurance of being loaned an artefact. If you've got to maintain it and you've got to keep it obviously we don't want to create a monetary value, but these things do obviously have a value - and the conservation itself has a value - so how would it be insured?

Esther: It's the same when museums loan artefacts to other museums across the country, they are insured and you could probably do the same with private displays

Fraser: and archives as well

All: (general agreement)

Ian: I tend to argue that as the curator of one museum I accept material from another I accept responsibility of curating it properly. The thing that worries me about the dispersal of artefacts to the general public is they don't have that background. They don't have that expertise and in fact the artefact could break. OK, if we're talking about a coin, it's probably not going to happen, but if you're talking about any other material wood, clothing, you've got serious conservation issues.

Esther: OK. You need to develop a concept for that, but it's an idea.

Peter: A high profile example, for as far as museums would be the moon rocks. So when NASA brought back moon rocks they distributed a rock to museums all around the world - to state museums and local museums and, by and large, many have gone missing and are unaccounted for.

Ian: About 22 kilos!

Peter: Yes, so nobody knows what happened to them. It's really interesting.

Crystal: There's a comment on YouTube.

Fraser: Yeah.

Peter: Alexis Catsambis brings up an interesting - oh sorry...

Crystal: That's OK. I was just saying that there's a comment on YouTube from Robert Smith, following the previous question. He thanks us for the answer, but he says he is still not convinced that there are artefacts that can't be sold so replicas are often put on display as they are in his local Fenland museum and originals are elsewhere despite them being discovered locally.

Fraser: Now that is a constant issue. In terms of distributions between national and local museums and it is very difficult in terms of arguments about where things are... what accessible means and which audiences they are reaching and also the importance of authenticity so does it have to be the original artefact? Is a replica a suitable stand in for the real thing in an archaeological world? And it's a really complicated issue in terms of what people think about it. I generally like to see things in terms of being close to their context of

discovery, but that's because I'm very fortunate and I do get to travel and I have a privileged position in that way. But I can see the argument that you want to open things up to as many people as possible and therefore moving them to a large centre, which increases their visibility, is a valid way to go forward. So I don't think, I think we're all probably going to disagree on this one!

Julian: It becomes complicated with shipwrecks, as well, which might be found in one place but are actually from a totally different end of the earth or place. I've also been to a lot of museums in North America and Mexico that have had some brilliant reconstructions of huge sites, like the Lascaux cave paintings and Egyptian carved temples and things which people who are in that museum who probably are never going to get to the other side of the world and it's much better to see that in some kind of full-size setting I suppose than a little postcard or a picture in a book or something just because of the way you understand the scale of things, so I think there is definitely a place for replicas and reconstructions.

Dani: I think the importance is just that they are labelled as such and that they are acknowledged for what it is so as long as people aren't trying to pass off a reproduction as the original I don't have a problem with it either I think it's a great engagement tool.

Fraser: I think you also, I think people also focus on - the discussions around those sorts of objects tend to focus on the rare and the exceptional. But I think there's also a lot that can be done with the mundane I think part of the real joy of doing archaeology is contact with material and the importance of context it isn't just an abstract thing, it is actually the joy of seeing things in their relationship to other things and I think there's a lot, I think the museum touch tables and things that people engage with are actually really valuable so in some ways I don't know but maybe we're a different group of people than in terms of what we do in terms of going into museums but I'd be happy with seeing less overtly special things and some of our curator friends are going to disagree with this but also having more things which are the day-to-day stuff that you can engage with. We've still got an element of the cabinet of curiosities rather than of the feely-touchy bit, which is what everyone relates to.

Helen: I think there's something very special about seeing and being in the presence of the original especially when it has got some age to it if you're actually there and it's the original

thing and you think 'Gosh! It's been a thousand years or a couple of hundred years since this was used' then that's amazing!

Geoff: That's human nature, isn't it? I mean it's even more special to be the first person to find it.

Helen: Exactly. Or the first person to touch it.

Geoff: The first person in two thousand years. Fantastic.

Peter: So Alexis Catsambis had an interesting - he brought up an interesting case that happened recently whereby there was a Roman cargo carrying amongst other things a bunch of lead bricks as ballast. And it was recently used for a particle shield at a scientific laboratory, so they took the bricks they were stamped, they cut off the area with the stamps and saved the stamps and then used just the blank lead parts they melted it down and made it into a particle shield So how do you all feel about that? It's destroying an artefact, however, they were duplicates.

Julian: Did they pay money?

Peter: No?

Julian: Is Roman shipwreck archaeology better funded?

Peter: I don't believe so, but I believe it was from one state agency to another state agency.

Helen: I do remember that.

Ian: Do they know where the lead came from?

Peter: Yes, they did a full analysis of all the ingots.

Geoff: But this encapsulates this last five minutes of discussion, doesn't it? What they've done is exactly what we were discussing which is hopefully, done all of the archaeology, got all of the knowledge and information out of it and then actually destroyed the artefact. Do we agree with that?

Ian: There's something missing there. We've got all of the knowledge out of it available using the technologies of TODAY.

Peter: Right. You never know what may happen.

Ian: a hundred years down the road...

Peter: Well, a great example of what you just said is that we've been doing lead isotope analysis for many years and it wasn't until the last five years that the National Oceanographic Centre here pioneered what they call a double spike method which is far more accurate than all of the previous examples and so you have this large error from lead isotope analysis prior to this that actually wasn't very accurate and now we actually can get down to the mine where it came from so if lead artefacts are gone and have been destroyed then that information is gone forever. Who knows what methods we'll have in the future.

Ian: Absolutely. That's the big issue.

Fraser: I think that's it and I think that's in terms of representative samples how much is a representative sample? These things are... it's - it is really difficult especially when you're dealing with difficult resources which also have an environmental impact in terms of extraction It's a really complicated confluence of issues in that respect and I can certainly have a degree of sympathy with the preservation of a percentage. I like the idea of the removal of the stamps in terms of diagnostic features and samples from those materials yeah, so I'm not unsympathetic to it as an entire project, but it is an interesting one.

Ian: Alternatively if they've got the stamps then they can still do advanced isotope analysis on those.

Peter: I actually think it is a great... it's furthering science in two different fields. I'm actually OK with it and I'm one of the most ardent archaeologists there is.

Julian: Is there a display?

Fraser: I'm sure there isn't. I really hope there is, but I think you're right, I think there's - there's this other - it's not part of archaeology - that I think often we don't do so well at transmitting to the wider world - is that we're also often more happy with the continued state

of material that we encounter something at a particular point in its trajectory of material culture but actually that's a continuation so its entry into a museum collection is actually only part of that and then it might, there it might be changes of hundred thousand, a hundred years, two hundred years, however many thousand years down the line and that actually we don't expect things to be static in that sense and so we're perhaps more flexible than people imagine but it doesn't change our ethical standpoint and so I think this is where sometimes people feel that we're playing fast and loose, but actually they are different things in terms of what happens to material and the justification and reason for it

Geoff: There has to be a judgement call doesn't there. This example about the lead blocks, I mean I'm sure we can all from our professional and interest perspective realise there's a limited amount of knowledge that you might ever wish to gain from 600 lead blocks.

Peter: And actually, something I forgot to mention is that you can't just use lead, any lead available, for them to use because lead on the surface has background radiation from the nuclear bombs that have gone off since Hiroshima, so it has to be buried under the water since before then, so very limited supplies of this so it was, you know quite important for the particle shield that this came from this source - from shipwrecks. Something that's made 20th century vessels underwater has to be quite valuable as a resource because if they're pre-1944 their steels don't contain any radiation.

Fraser: OK. We're actually drawing to a... unbelievably an hour has passed of conversation. Well, I suppose we have one quick question which we should answer from Kevin Murphy as he put something in and this is 'What happens to shipwrecks that have been unearthed due to the storms at the beginning of the year also winter storms wherever you are, does this not destruct the site and destroy or remove the contextual interest material that we're interested in? And is it still worth excavating these sites? And again this is sort of a grey area in that I think we'd always say that storms are interesting because they can expose storms can damage, but we don't know the degree of disruption and just to say that something's even moved by natural processes doesn't mean that we can't construct archaeological significance from the material and their redistribution. There's always something that we can learn from these things so it might look very destructive but actually we can often find really valuable information In fact, I have some students looking at the impact of storm surges on vessels at

the moment because it is really interesting and it has lots of impact from both what could we get from excavating and also in terms of preservation An interesting example of course from the East Winner Bank As Julian knows very well, yeah!

Julian: Yeah, that wreck we didn't know it was there. Totally new vessel and that was exposed in a different way and is now reburied again and actually I think a piece of it has come up again so I've got to go and look at it again next week. But other bits of it are scattered around the sort of countryside nearby which have lost a bit of meaning because we don't know if they're actually from that vessel or but the main coherent structure in some ways it was almost perfect because it came up we had a brief chance to go and learn about it identify it and now it's been buried again If you know of a site like that - get some mates and take a tape measure out there and record it and lots of photographs.

Peter: In North Carolina, in the outer banks, there was a ship that came up during a storm. Popped up and it was just a keel section and a few frames and they were actually able Carolina University went down with students and recorded and they were actually able to reconstruct figure out which ship it was based off the ship construction and the fasteners and I believe it's the oldest ship found in North Carolina it's an early 16th or 17th Royal Navy vessel they're able to reconstruct everything that happened to it. They knew it had disappeared near there, but they were able to reconstruct this entire story of this Royal Navy vessel that went down off North Carolina just from a few bits of timber that popped up out of the sand.

Fraser: Well, in which case I think we will draw things to a close I hope this has been of interest to the people watching and I only apologise to Paul and Alexis for their time and their lack of video/tele presence but we'll try and make sure that we find ways to correct things if we ever do this again Thank you all for your questions and yes, I hope we answered them.

All: Bye!

A number of minor changes have been made to this transcript to improve its readability.