Title

The Intangible Podcast Episode with Jana and Terra from MIT's Wunsch Conservation Lab (2023)

Summary & Transcription

Subject

This document contains screen read text for the transcription of *The Intangible* podcast episode hosted by Nicholas featuring conservators from MIT Libraries' Wunsch Conservation Lab. This episode premiered on Spotify and other online streaming platforms during Preservation Week (30 April – 6 May 2023).

In this episode

In this Preservation Week special, Nicholas is joined by Jana Dambrogio and Terra Huber. Jana is the Thomas F. Peterson (1957) Conservator at MIT Libraries and Terra is the Conservation Associate in the Wunsch Conservation Lab. The Wunsch Lab's mission is to preserve cultural heritage through thoughtful collaboration, innovation, research, and discovery. In this episode, Jana, and Terra discuss the amazing work of the Wunsch Lab and they analyze different conservation materials from the Wunsch Lab that they sent Nicholas. One key focus of the episode is letterlocking and its role in preservation. To learn more about letterlocking visit: http://letterlocking.org/ and http://brienne.org/. Enjoy this very special Preservation Week episode!

Overview

The Intangible is a podcast discussing cultural preservation in the modern world. From statues, to music, to cancel culture, to literature- The Intangible focuses on every aspect of modern culture. Cultural Preservation is normally discussed in the context of history and ancient archaeological artifacts. But, what about our current culture? What are the controversial aspects of our culture? Do we even want to preserve some parts? These are some of the questions that The Intangible aims to

answer through discussions with many opinionated guests with focuses in different fields of culture and cultural preservation. For more information, check out the website: https://www.theintangible.co/

The Intangible is Nicholas Sikellis's podcast. Nick is currently a high school Junior graduating in 2024. He was born in Boston, before moving to Athens, Shanghai, Munich and finally New Jersey. Last year, he started the Cycladic Preservation Group (https://www.cycladicpreservationgroup.com/), which is an organization focused on preserving Greek culture but also raising awareness for cultural preservation worldwide. Nick started *The Intangible* to have great (and sometimes controversial) conversations with many opinionated people in the field of modern culture.

Authors

Jana Dambrogio (she/her/hers), 2023.
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Alt text for some versions of this episode that include video. Three individuals are in three separate rectangular windows on the screen. Occasionally, they hold up boxes, folded sheets of paper, or small samples of writing substrates (paper, parchment, or papyrus).

Transcription

Nicholas: **[00:00:00]** Hello. Hello. Welcome to another episode of The Intangible Podcast, and this week and today we are joined by two very, very special guests who will introduce themselves shortly. But first I just wanted to mention that we are currently in Preservation Week. So, as you may or may not know, April 24th marks the beginning of Preservation week, and I hope during this preservation week you can go out and help preserve and do anything that you've heard in the past episodes and that you'll hear today. I hope that you'll be able to go out and help in your community and just help preserve because preservation of culture is such an important aspect of our society and something that we really should be doing more. So, without further ado, let's get into the podcast. And today we are joined by

Jana: Jana Dambrogio, Thomas F. Peterson [1957] Conservator here at M I T Libraries in Cambridge, Massachusetts.

Terra: Terra Huber Conservation Associate in the Wunsch Conservation Lab **[00:01:00]** working with Jana.

Jana: and my pronouns are she/her

Terra: and mine are they/them

Nicholas: And I am very, very excited for this episode because for this episode, I actually got something in the mail from Terra and Jana, and I'm extremely excited to share with the listeners what I got, and we'll be talking about that soon. But I think to start off, I mean, you already did introduce yourselves a little bit, but if you could just go a little bit more in depth into who you are and what really led you into this field of preservation.

Jana: Would you like to go first, Terra?

Terra: Sure. Um, I learned about conservation when I was an undergrad in art school at Tyler School of Art in Philadelphia.

And, um, I was majoring in painting and minoring in art history and in high school I had really loved chemistry class a lot. And, um, I learned about art conservation, **[00:02:00]** um, kind of towards the end of my, uh, undergrad. And at first I thought I was mostly interested in exploring painting conservation because I was a painter.

Um, but as I dug deeper into the various, uh, specialties I discovered books and archives, and that was really, really exciting to me. Um, because I love the idea of, it's like such, it's such a direct way to preserve culture. Conservation in general is, but I really, really, really loved the idea of preserving, um, like knowledge in the written word form and also the physical, um, it's the tangible, you know, version of knowledge is, books and archives. Um, so that, that's what drew me towards book conservation specifically.

Jana: I didn't know you got started in paintings, [00:03:00] too.

Terra: Yeah.

Jana: Did you read that article? Did you read articles about painting conservation?

Terra: I did. I, I actually had an independent study with one of my Art history professors. And so, I was reading some books about painting conservation and then we would meet, um, once a week about it. And um, and it was all very interesting and everything, but once I learned about book conservation, I totally fell in love with books.

Jana: Yeah, same.

Terra: Absolutely.

Jana: I totally fell in love with books.

Terra: Absolutely. So I.

Jana: I got interested in conservation right out of, high school.

Mm-hmm. And I had been sitting in my orthodontist's office and he had the 1989 copy of National Geographic's coverage, a story on the Sistine Chapel ceiling mural cleanings. And I just read that thing, cover to cover and uh, and then I got really lucky. I went to undergraduate **[00:04:00]** at University of Pittsburgh and I volunteered at the Carnegie Museum of Art, and I got a job as a volunteer for the impressionist show.

And the museum's volunteer office was just, had a comprehensive, holistic approach to inviting even a volunteer into their community. And they took us on a tour of the entire Institute. If you haven't been to the Carnegie Museum of Art in Pittsburgh, you should go because it's all connected.

The art museum connects to the history museum. Anyways, they took us from the library, uh, past the music hall all the way down to the art conservation lab where I saw my first painting under the illumination of irradiated light, you know, "black light". And I immediately walked up to the conservator and I said, I have got to work here.

And so I volunteered and then slowly through the process of elimination was like, nope, **[00:05:00]** don't wanna be a painting conservator. I don't wanna be a mural conservator, I don't wanna do objects. But then when I saw books, and Emily Dickinson's manuscripts, then I was like, this is for me.

Nicholas: Yeah. I mean what more, could you ask for, finding a field you love and Yeah?

Jana: Yeah.

Nicholas: Both of you. That's great. And I also, I mean, uh, I'd also like, uh, just to, if you could talk a little bit about your work currently right at, at Wunsch Conservation Lab and what the Lab is, and what you work towards doing and, what your goals are. Maybe like, uh, yeah, whatever you'd like to say about the lab.

Jana: Sure. Our goal here in the Wunsch Conservation Lab is to support the Libraries' mission and the Institute's mission, which is always changing because

time is always changing and MIT is the best; aims to be the best. Right? And they're always like, okay, we're gonna walk the walk, we're gonna do the hard thing. We're gonna, if that's important to the world, then we're gonna, we're gonna try and solve those challenges. [00:06:00] And so our job, we directly link into the mission of the Institute, to preserve knowledge. So that's, that's vast, right? So Terra and I preserve, we work on preserving the books and manuscripts, the collections, the physical collections that are largely on campus, stored on campus.

And that ranges from, uh, single-handed [should be single-item treatment, which is why conservators are so important because we can do a lot of versatile, high-level things. Like, we can turn and conserve a 14th-century manuscript, and then we can go and figure out what belongs in a pack that people use to respond to emergencies, to then teaching someone how to make a sheet of papyrus in a class the professors would like to have augmented for their seminars to, um, **[00:07:00]** figuring out what, how to make a, um, book mount for an exhibit so that books can go on display. So wherever a book needs to be viewed or handled, we uh, ensure that that handling happens safely, and we maintain all the storage spaces that those collections are in, whether it's in the reading room temporarily, or if it's in its long-term storage place.

Nicholas: And I think you touched on a very important point there, right? Like in the past episodes and for most of this podcast, we've been talking about the preservation of culture. But in, in itself, what library preservation does in book preservation is also preserve knowledge, right? And. Equally, if not more important. Right. And they go hand in hand really culture and knowledge, so

Jana: Right. We also are a research lab. We also do research. Mm-hmm. So we research conservation treatments and , we also love to lock in our, uh, which we'll talk about in the podcast, our projects, uh, if the [00:08:00] Institute's dedicated to, uh, environmental, I mean, um, environmental Preservation. Then we want to figure out ways we can build book cradles or something that's upcycling materials that would otherwise go into the dumpster. You know, how can we constantly look around us for solutions to help preserve the collections without creating a lot of waste for the environment, for example.

Nicholas: Yeah. Yeah. And, and I mean, I, I can't really wait any longer. I have to ask you. About what you sent me and to the, to the people listening to the podcast right now. Uh, these will be on the website. I'll take pictures of everything. And, um, they should be easily accessible next to the transcript of this video.

So yeah, please let me know if you can't find them, but they should be there. So starting with this, I'll call this figure one for now. Um, could you just talk about, a little bit about what this is and what I should do with **[00:09:00]** it?

Jana: Yeah, you have to hold it up a little bit and it might be more than one thing.

What do you got there?

Nicholas: So I have these here.

Jana: Oh yeah, you do have, okay. So yeah, that's, Terra can show you what that transforms into.

Terra: So one all folded up that transforms into this bin.

Nicholas: Mm-hmm.

Terra: And these bins are designed to fit into a standard-size archival document box that we use for the majority of our collections.

Terra: I'm sorry.

Jana: Yeah, I think the blurriness is hard to see.

Terra: But it's. You know, storage is a huge part of preservation. Mm-hmm. And, um, it's also a huge, um, you know, use of space. And so it's really, **[00:10:00]** really important to, because space is at a premium no matter what institution you're at. And, um, and also creating safe housings that are, um, customized for the objects is important, but there's ways that you can, um, treat something standard like the standard size box, and then within the box customize it for objects.

So what we're trying to do is it's safer to have, um, your storage containers all be the same size. Like if you have a big container next to a small one, next to a big one, you know, smaller ones can get shoved to the back and, um, it's just, it's much easier to handle and to keep track of things if they're all in, um, standard sizes.

So we, maybe I should take the blur off, but let's see if this works

Jana: I think you can unblur it. **[00:11:00]**

Terra: Yeah, this is silly. Yeah. Um, so the, the other item that you have is one of these pockets, and we make them in a number of widths. And these were, correct me if I'm wrong, Jana, these were originally designed for tarot decks.

Jana: That's right. Yes. MIT has the largest collection of [contemporary] independent,

Terra: artist created [tarot decks].

Jana: Yes, thank you. Yes. Art, they're like little, uh, they're, they're basically like, um, unbound artists' books. Right. The Tarot deck that's, and so there's this huge, uh, this huge re uh, in interest mm-hmm.

And artists from around the world are making tarot decks and they're in these super small [edition] runs And, they're gonna disappear, almost **[00:12:00]** ephemeral. And so MIT collected them and a lot of these artists will now be in the Library of Congress. They will know that they existed and will know that their art existed.

And they're just gorgeous. And so we had a blast having these collections come in the lab a few years ago, right before the pandemic. We're like, well, how do we look at all these little tiny boxes that have other things that go along with them, how do we keep them all together [for example crystals or cloths]? And so we thought, why don't we make little pockets for them to fit into in the, in our doc, we call 'em doc boxes, but they're document boxes because the document box is kind of an easy way, it's like a nice size to kind of, you can pull it off the shelf, you, it's ergonomically not gonna hurt you.

It holds enough archival materials. And so we wanted to give that challenge to ourselves.

It also keeps ordering easy for our, our admin staff to just say, look, we're gonna always **[00:13:00]** order these same 10 sized boxes, and then we'll work within them

Nicholas: It's an organizational technique as well. Right?

Jana: Right. And then we take it a step further and we think, okay, what else does MIT like us to do? They like us to be operationally efficient.

They like us to really respect the environment, of course, which we all wanna do. And so we really challenge ourselves to stay away from, for example, like adhesives. So that bin, when you make it, will be entirely self-locking. It's gonna lock into place and be super sturdy and there will be no adhesives used.

And we were inspired by a tarot box that we saw that came into the Lab that we had to put together to put the, the, the tarot deck in. And we were just like, what? So if you, when you come to visit the lab, Nicholas or anyone you know that comes to come by and wants or tour, uh, hanging around the Labs or all kinds of boxes from chocolate boxes, um, to tarot deck boxes that inspire **[00:14:00]** us to, to create the, these enclosures.

Nicholas: Very cool. Yeah. Uh, so I'll, I'll show a before and after of this. We'll be on, on the,

Jana: Yeah, have fun.

Nicholas: hopefully I can get the after. Yeah. Um,

Jana: Well, well, we, we hope to, I think before the pandemic kind of slowed us down a bit. I mean, the pandemic slowed us all down a bit, but we, before the pandemic, we had, uh, we were, one of our goals is we, the Libraries' goal is to be open, openly accessible, and so we want to do that, too.

So we created these boxes for ourselves, and then we find a way to share them openly, and accessibly. So we put out the plans for them. And then we make them accessible by PDF so that they have alt text and they have information. And so we **[00:15:00]** just, those are in our queue up next. Mm-hmm. So that people can just download that information and use it themselves.

And then we collaborate with the group called the HF Group that actually fabricate them flat and then we put them together. And so they help us, uh, refine our designs. And so that's just one of the things that we do to kind of, uh, practice the, the visions of, of the director Chris Bourg and the senior leadership team here at the Libraries to make things as openly as possible.

Nicholas: Yeah, that's great. Have it's, it's amazing for hopefully, Uh, the listener will be able to check that out. I'll, I'll put all the links in the description, but yeah, they'll, they'll be there. So, moving on to figure two. I guess you could call this, I, I haven't, I haven't exactly opened this yet and I don't really want to, I feel like I'm gonna break it.

Jana: You're not gonna break a thing. **[00:16:00]** Go on, go on, get in there.

Nicholas: So here I have multiple things. Ooh, this looks like some sandpaper.

Jana: No, no, no. It's one side smooth and one side's kind of fleshy.

Nicholas: Yeah. Yeah.

Jana: Are you grossed out by touching animals that are no longer here? Do you wear leather shoes? That is a piece of parchment.That's another way to take an animal skin and process it. So if you've ever seen like one of your relatives who were around maybe a hundred years ago, their diplomas, that's made out of parchment. So animal skin. Wow.

Nicholas: Wow. Okay. So all of this is parchment?

Jana: No, one is parchment.

Nicholas: Not this. This right?

Jana: That is parchment. Yep. Uh, that might be paper. We sent you a piece of handmade paper. So what **[00:17:00]** paper used to feel like every single sheet for hundreds.

Terra: Uh, that's the parchment.

Nicholas: That's the parchment. Yep. Yep. That's the parchment.This is the handmade paper, correct?

Terra: It's hard, it's hard to tell.

Nicholas: Yep. This is the handmade paper.

Terra: Yes. Yes. It is pretty textured though, so I understand why, um, why it might feel sandpaper-like. Yeah.

Nicholas: And then I have these two left.

Jana: Yeah. On the, on the, the one with the writing, the black, black writing is Islamic handmade paper.

Nicholas: Wow.

Jana: And the other one is a, uh, a fragment, a remnant of a handmade sheet of papyrus sheet that the students make here. And so we have a class or professors in the, in the histories and humanities departments. They come in, their students come into a dark room that's all candle lit with not, you know, not **[00:18:00]**; with flameless candles. Um, and they write with quills and they write with inks and they write on all different types of papers from around the world to see what it feels like with the different writing implements.

And that's one of the ways they're introduced to writing tech. So, MIT's motto here is also Mens et Manus. Learn by doing. We, love conservators because we, we, um,

have to know how to make books to fix them. So we're bookmakers, book binders. Yeah.

Nicholas: And now, honestly, one thing that I've been, I, I have to, I mean, actually I was excited equally for all of them, but this is, this has intrigued me now

Jana: Oh, wait, but wait. Before you get to the that, the other thing that's really important about why, you know, we, we've sent you these little, these little bits. Why did we send you the little snippets of the writing technologies, right? The traditional writing technologies. **[00:19:00]** So before we picked up our cell phones to text and picked up the phone to call people or Zoomed, you were handwriting letters.

You were handwriting on paper, papyrus, and parchment. And a thousand years ago was the last big, huge shift in the surfaces that we write on. Writing technology, we switched from papyrus [actually parchment!] to paper. And now we're living in the moment when that shift is happening, but now we're writing in the air like we're, our writing is going into a cloud.

We get to live through that. And the pandemic, I think the events of the pandemic have catapulted that and just made it happen quicker. Where we walked down the halls here and there's file cabinets lining the hallway. But, um, why did I bring this up? Is that the lab in order, the lab is also embracing in a kind of non-traditional kind of way, **[00:20:00]** this openness, this desire to share what we have.

And the Wunsch Lab is just this rich resource of, um, these sorts of supplies that we used to teach our, teach our teaching collection and the equipment that we use. And so the Wunsch Lab is becoming, um, historic artifacts where they're being accessioned into MIT's Collections, and you can find them. And so they'll be our teaching sets online.

So the teachers and professors, anyone could see what we have here and maybe wanna come study it. So these containers you see above us, they have those papyrus bits in them, like all the components you need to make a sheet of papyrus. So if you came to us and you're like, Jana, we, I'm doing this project, do you do

have, I see I went to your, I went to your, your archival entries and I saw you have this thing and, and, and you're the only place in, in, in this part of the world, and I'd love to come see it. We'd **[00:21:00]** make that happen because MIT is open. We want to share and be accessible, and so that's one way that the Wunsch Lab can embrace. Does that make sense?

Nicholas: It does. And that's really great because all, all the, every, almost every episode that I've had has, the one thing everyone has talked about has been the availability to education and being able to learn. So I mean, that's great. Having that resource. I hope everyone again, visits and more, right?

Jana: Yeah, exactly. Well, this is the way they can visit without physically coming here too. You know, they can peruse our teaching collections. Mm-hmm.

Nicholas: Mm-hmm. Of course. And now the letterlocking. This is letterlocking? Am I correct?

Jana: Hahahah. That's exactly right. We sent you a bunch of locked letters.

Nicholas: So what would I do with this?

Would I just kind of like force my way in?

Jana: Right. So what we've done is we've sent Nicholas a bunch of, uh, letterpackets. **[00:22:00]** So this lab also is leading the research in the rediscovery of how people sent letters without envelopes.

Nicholas:: Mm-hmm.

Jana: So it's surprising, I mean, we can hardly believe it ourselves that the modern-day gummed envelope that we use to send bills or letters wasn't invented and put into mass, mass production until the 1830s. So up until then, throughout all of time, different, different cultures around the world, people would fold up their papyrus, their parchment, or their paper after they wrote a letter, and they would fold it in all those different ways that we sent you.

And some had more security built in them than others. So some were to keep, uh, snoops, like, uh, interceptors who might have, because there wasn't a controlled, like postal service. And sometimes the letters are folded to, or also in addition to beautifully, like **[00:23:00]** in, in a way so when you receive them, the address, like the one you like, what's so, what's so cool about it if you hold it up for your viewers.

Nicholas: So I'll, I'll take a picture of this. This'll be figure three. Okay. But I, what I, first off, I know all of them have this, but this. And I think most of them do. At least some do. Yeah. Yeah. This, this red, like almost design and I, I like the, I mean, I guess it could be a square, but the diamond.

Jana: It's a diamond.

And why is it a diamond? You got it. That's exactly what we, we, um, we thought so too. It's because the address is written. The person who intended to send that, they turned that packet. They didn't keep it as a square, but they turned it to a diamond orientation, and then they wrote the address. And so we do, we call that the Brienne Diamond because we found three historic examples by three different individuals who after writing their letter, folded it up into a diamond **[00:24:00]** shape and then addressed the packet.

Nicholas: So that's like a distinctive style?

Jana: Exactly. It's a distinctive letterlocking style, and that's exactly what we call it.

Nicholas: So I'm, I'm gonna attempt to open this.

Jana: Go for it.

Nicholas: See was inside.

Jana: Yeah. Have fun.

Nicholas: Well, if I'm able to, I don't wanna tear up the message either.

Okay. I'm getting somewhere. Bear with me here.

So do I have to tear the, the, the red?

Jana: Sometimes you do. Yeah. I mean, if. If you are a spy, you know how to get into some of the packages without anyone knowing you, you've got all these tricks of your sleeve. Okay. But most people are trying to, to, to, are wanting to receive their letters so they can just open them and read them.

Like letters are meant to be opened and read.

Nicholas: Mm-hmm. So first thing I see, I'm not, I'm not fully, I haven't fully opened it, **[00:25:00]** but it's this, okay, it's this eight, nine. It says eight here. And nine here.

Jana: Okay.

Nicholas: Should I keep on going?

Jana: I'll keep on going. Keep on going.

Nicholas: Okay. Yeah. Now I see, Ooh, a lot. It's gonna be like a map maybe? Maybe that's the outside?

Jana: Yeah. You might have received one. I think the one you're opening is an exploration in the how to teach. So it's one of the earlier models that we made of the Bienne diamond. Is, has each step, like each crease numbered, and then the writing is in the panels.

Nicholas: So this is really, really cool. I'll, I'll take a picture of this.

Jana: The inside is pretty, yeah. The original is not like that. That [that is the crease pattern] inspired that letter [model Nick opened]. The writing[on the

original] is just written in any available space, on the letter, on the letter sheet, the substrate. But we couldn't believe the beautiful **[00:26:00]**, the panels that emerge, the designs, when you open the locked letters.

And so letterlocking actually is a conservation-driven research project. So we don't read the words in, in the conservation lab is the way we don't read the books. We're reading the folds for letters and uh, the tears around the sealing wax. So the most important point we wanna drive forward is that letterlocking is one of the most fun ways to teach about, to teach conservation, because what we're looking, when I first saw them about 20 years ago, there was these tears and creases and things, and they look like damage, but they're not.

And they're, they're not. They're intentional manipulations. They're, they're what we now in our study call manipulations. That what was a flat sheet of paper to become something else. A letterpacket, and then another manifestation **[00:27:00]** with the open letter which preserves the mountain and valley creases.

And all that information can tell you about how secure somebody folded it or can tell you how to reverse engineer it and how they tore it open, or how they may have refolded it to store it. And so we advocate that all of these manipulations that might not look pretty, especially in a photograph or in an exhibit case ‘cuz you just have all the lights playing off all the creases.

Um, we advocate, you know, in the conservation of locked letters, you may want to think twice before you might humidify and flatten that sheet of paper or erase the panels that would've been like the address panels that have lots of dirt on them because they [the creases and dirt] tell you something. And, and so we, and, and even in our study trying to invent the field, as we've been traveling around these last 10 years, my colleague Daniel Starza Smith at King's College in **[00:28:00]** London, we both were like coming at it from different angles.

He, a literary historian, and he reads the words for some periods of time and he's like, wow. Uh, the way that, for example, John Donne pulled his letter, his letterlocking techniques are really in align with the way that he's writing the contents of those letters and his poetry style. They're very playful and, and you

know, a little bit off the edge, you know, or, or edgy, you know, like a little bit of a variation that we only see with John Donne.

And I couldn't see that because I'm obviously just looking at the creases and the folds and how I can preserve them and he's saying no, wow. It's really, there's an interconnection here. And so the more we started to travel around, we had the same feedback from different people saying, and we don't know what you're doing because all we thought people did was put that little red blob of adhesive on and then seal their letters. We didn't understand we can't read or see the folds. So it's been really fun to go around and teach people how to see the **[00:29:00]** folds. Yeah. And all the other, uh, manipulations. And then they can't unsee them. So that's been a ton of fun and a wonderful way to teach people about conservation and the humanities or anything else you wanna talk to them about.

Cause the minute they open the letter or, or encounter an unopened, this unopened letterpacket, they're, they're now in your space. Uh, they're not thinking about a grocery list or like, they, they're really thinking about this, this challenge they have in front of them. And then a conversation really does blossom.

What do you think, Terra, about your encounter so far with, with, um, sort of some of the questions that Nicholas has been asking us?

Terra: Well, I was just thinking about, um, what we were talking about, um, manipulations or perceived damage on, on cultural objects and how, um, what a **[00:30:00]** conservator brings to the table when looking at physical objects is looking at the materiality of the objects.

And, um, like Jana said, we aren't the subject experts of, for instance, what these letters say. So we, we are however the experts on the materials used at the time. And then also what materials are used and how that, um, informs, um, you know, the, the creator. So what I'm saying is that sometimes you can see something that is totally divorced of the materiality of what was created.

So you could see John Dunne's letters written, you know, on a screen or reproduced in a book elsewhere. But when **[00:31:00]** you see the playfulness with

which he folded that, and then, um, even if something has been unfolded in the past, if you can see the, um, the staining patterns or the dirt patterns from handling over time, sometimes in books, you know, I'll see the pages that have extra soiling from people, they keep returning to that page.

And it's like, maybe I'm not the expert in why someone keeps returning to that page. And then I can talk to a curator. I'm like, I noticed that this page seems heavily used. And then they'll take a look at it and then we'll have a discussion about it.

And so you can have this really cool, you know, dialogue between different specialties where it's like you each are bringing a different observation to the table, and then that all equals the full context, um, of the creation of these cultural objects, which just, it gives you just a, **[00:32:00]** a more fleshed out picture of, of what was happening, of the intention of the creator of, you know, who the audience was when they were creating it.

And that's like the really fun thing about conservation.

Jana: And on top of that too, conservators are also also trained in, we are trained in scientific imaging techniques. So we learn how to take images that we, you might see MIT providing in our digital first initiative so that people can have digital access to content, but conservators know how to take, in addition to that, scientific documentation and imaging that help you see the surfaces, like the nooks and the crannies in the letters.

So we are trained, uh, or know what to look for when we ask for the types of imaging for reflective transformation imaging, which helps you see the topography of a **[00:33:00]** surface, uh, in all different light sources.

We, once we have this, this conversation with curators and archivists, we can then say, oh, why don't we use these X, Y, Z techniques to learn more that are non-invasive and non-destructive.

So we really are learning, uh, all these different holistic, like in a holistic way, all these different techniques of interrogating the object to figure out what it can, what intangible information is lurking in it, that we, we just, uh, is waiting for us to discover if we don't alter it and erase it forever. And if we, uh, kind of preserve it and let it tell its own story, that being the artifact.

Nicholas: Yeah. There, there's, there's clearly so much you could learn about a person, a group of culture, and just letterlocking in general. I feel like you don't really hear it that often in the field of preservation, but it's really something that should **[00:34:00]** be there more, right? Wow, this is, this is amazing. And I'll put this on the website as well as the other, um, the other ones that you sent me, just to show the viewer the contrast, right? There's so many different types, sizes, shapes, colors. Oh, this one's really cool too. Yeah, I like this one.

Jana: We have a website, um, http://letterlocking.org/ and https://brienne.org and we have a YouTube channel, a letterlocking YouTube channel (https://www.youtube.com/@Letterlocking), which helps you; so if you wanna find that letter onYouTube you can look for the name of it and, uh, and follow along.

Nicholas: Yeah, for sure. And that, and that, once again, that'll be in the description. And we do, we do only have five minutes left here.

Jana: What else would you like to talk about?

Nicholas: So I, I think, I mean, is there anything else you here, I mean, there's a lot more here. Maybe, maybe I will ask about this now. **[00:35:00]**

Jana: That is, um, so the letterlocking is a part of a team called the Unlocking History Research Group, and right when we started to write about letterlocking to kind of publish a paper, so you kind of published all your ideas and get 'em nice and organized so that people can access what you think.

We were on a team that rediscovered a trunk of undelivered letters that had been collected 300 years ago by a husband and wife, postmaster, postmistress team in

The Hague. And 600 of those letters remain unopened. And they're all letterlocked. And we were invited to be on this team.

And we have never studied the unopened letter, and they really hold a lot of manipulations that kind of disappear when you open them. Uh, that we can only guess towards when we study the crease patterns [on opened letters]. And so we, we **[00:36:00]** put together a cross-discipline, cross-generation team, uh, international, to figure out can we scan the letters using x-ray technology that's used usually for teeth, invented by a group at Queen Mary [university] in England. And could we take that and could students at MIT with our uh, CSAIL Department [MIT Computer Science & Artificial Intelligence Laboratory] figure out how to write an algorithm pipeline to virtually unfold the letters and read the folds, which was really, we were very curious about.

And the words, because they were written in iron-containing content. And that trunk really pushed us also because we studied the 2000 open letters and we studied their crease patterns, and it was a period of time that is between the **[00:37:00]** surge and letterlocking in the 1500s-with lots of spies and intricate letterlocking techniques–high security, and the gummed envelope.

And you see this flap technology emerge, which on a letter, you see this on an envelope, modern day envelope, you've got this flappy bit, right? That you, yeah, you stick the letter into the container, you close the top. We call that a lock, but to be continued. The, so the, in studying that trunk and all the letters and then the letters, we had amassed and made models of, we started to categorize them.

And this chart you're looking at is like the periodic chart of letterlocking. And what that does is it creates metadata because we had major institutions starting to come to us and say, we wanna start attaching our metadata for our, we wanna understand locked letters and we wanna put that metadata, so that people can search our collections and start to study letterlocking.

So we had to create **[00:38:00]** the little codes for, oh, you have that diamond shape letter. What category does that fall into when it's open and when it's closed? And so that we decided our intentions were, we did, we wanted to pause on

publishing the paper and figure out how to write, uh, what we were writing so that it could be a resource for teaching and for study.

And so we, uh, met students here at MIT and they, um, they wrote an algorithm pipeline that virtually, um, that open letters and that article is openly accessible and that launched the field of letterlocking about two years ago.

Nicholas: Very cool. And this is gonna be figure four on the website. And thank you so much for coming on today.

It's honestly been one of my favorite episodes and I have all this to open. This will all be on the website and both Terra and Jana and the Wunsch Conservation Lab and letterlocking, **[00:39:00]** all that information is gonna be in the description. So I really hope you guys check that out. It's amazing. Amazing people, amazing labs.

Jana: Happy Preservation Week.

Nicholas: Yeah, happy Preservation Week. It's a huge week. So do whatever you can to preserve in your community, local, help out. And if you're ever in Massachusetts, I really recommend the Wunsch Conservation Lab and see all this amazing stuff.

Jana: Write to your legislators, you know, become members of your cultural institutions and, and go learn from your cultural heritage!

The end.