

Dr. Lisa Fagin Davis: "Medieval Manuscripts and Digital Collections: The Case for IIF" at SBU Center for Digital Humanities 2021-11-04

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[00:00:00] **Chris Sauerwald:** I'm Chris Sauerwald on behalf of Stony Brook University Libraries and Stony Brook University Center for Digital Humanities, it's our great pleasure to finally welcome Dr. Lisa Fagin Davis of the Simmons School of Library Science. She's the Director of The Medieval Academy of America. She is a medievalist, a fragmentologist, a manuscript detective and a IIF evangelist. So without further ado.

[00:00:28] **Dr. Lisa Fagin Davis:** Hello, hello to the Zoom world! This is my first hybrid event. I've never done something quite like this before. So I'm really excited to have humans in a room and people joining us on Zoom. I see a lot of familiar names hello out there and, uh, we actually have manuscripts. We have IIF demos going on. We've got live demos. We've got different cameras coming in at different places.

[00:00:56] This is a, it's a whole, it's a whole extravaganza for you. So I'm glad that you're here. And, uh, let's just get, let's get going. So I'm here to talk to you today about the International Image Interoperability Framework or IIF uh, and in particular, how IIF enables manuscript research in really exciting ways and in particular, the kind of research that I'm very interested in and others as well, working with, um, manuscript fragments and in particular single leaves, uh, that are so, so common in North American collections.

[00:01:34] The reason single leaves are so common in American collections is because back in the 1910s twenties, thirties, forties, a hundred years ago, book dealers figured out that they were going to make a lot more money if they cut up books and sold them off page by page. Instead of selling one book to one person, they could sell 250 pages to 250 people and they would make a lot more money.

[00:02:01] And in the process of this, um, hundreds and hundreds of hundreds of medieval manuscripts were cut apart and scattered to the winds. And are now literally scattered, scattered leaves across the United States, Canada as well, less so in Europe, Europe has its own fragment history. Um, here in the States, the real story is this capitalist, um, "biblioclasm", uh, or destruction of books.

[00:02:32] And it's an irreparable destruction. These manuscripts that have been

taken apart, will never be able to be put back together again, literally they're just too scattered. But thanks to IIF we have other, um, opportunities for how we can, uh, for how we can remedy and remediate in the digital world, what has been broken here in the analog, uh, in the analog world.

[00:03:00] So let's see if I can make this work. There we go. All right. Here's the. The criminal of the hour "he was not a criminal, he was not a criminal. He was a good and kind loving man who was very misguided, uh, in what he did. This is Otto Ege and Otto Ege lived and worked in Cleveland. Uh, he was a book dealer. He was also a teacher.

[00:03:24] He taught, uh, typography and the history of the book and he was really interested in the history of the handwriting. And so when he. Started breaking up books. He was breaking up books that for him at least seemed of interest typographically that had interesting scripts, interesting examples of different kinds of medieval handwriting.

[00:03:49] And he broke up hundreds of manuscripts and hundreds of books. And when he was, um, towards the end of his life, he started this project with his wife, Louise, and she completed the project after his death in 1951. And that project was to create these boxes. I'm going to grab our little camera here. Oh, Nope, no, that won't work.

[00:04:19] We'll look at it over here. Um, can I have a little bit more wire? There we go. Perfect. So if we get the camera. I can show the zoom world here. It is. Great. So turning it around. Look at that. There it is. All right. So here, we're looking at this box titled Fifty Original Leaves From Medieval Manuscripts, Western Europe, 12th through the 16th century.

[00:04:49] And yes, for those of you in the room, if you look over there, you'll be able to see what I'm doing with the camera, you can also, if you don't want to, you're welcome to stand up and come over here and take a look too. Um, and so he's, you can switch out of the camera now, go back. There we go.

[00:05:06] So there are, there were originally 40 of these boxes and what Ege did was he took 50 manuscripts that he owned, fifty complete manuscripts. And he took one leaf from one manuscript, one leaf from the second, one from third, fourth, and fifth and created these decks of manuscript leaves and put them in boxes. So in each of these particular boxes, the 50 original leaves boxes, there are 50 leaves from the same 50 manuscripts. And leaf number one in this box is from the same manuscript as leaf number one in every other box, there were originally 40 of these boxes and uh 31 of them have now been found. Two of them came to light just in the last few years. One that belonged to the Ege family that they had kept in a, in a, a bank vault in New Jersey for 56 years.

[00:06:11] Uh, and that was acquired by Yale University and that was Ege's personal box. And so that box is full of really nice, particularly nice examples of

the leaves of these 50 manuscripts. The other box that just came to light was found in Ohio. And because Ege was from Cleveland, there's a huge number of leaves that came through his hands, that have ended up in Cleveland.

[00:06:38] Or ended up in Ohio in general. Uh, a gentleman going through his uncle's home after his uncle passed away, his uncle was a hoarder, just piles and piles of books and things in a basement bathroom, under the sink, he found one of these boxes and sold it at Christie's last year for a lot of money. And it now belongs to Harvard.

[00:07:00] So these boxes do come to light. There's still more of this material, uh, material, out there. And I want to very quickly show you some representative examples of what you find in these, uh, in these boxes. So you can, you can kind of get a sense of what we're, what we're talking about. So I pulled four mystery leaves.

[00:07:20] Here they are in chronological order. We're going to start here, with leaf number one, you want to stand up and come and take a closer look. Uh, I'm going to pull up the document camera for those attending from afar. Now what, what, uh, SUNY has done here, Stony Brook, not SUNY, SBU has done. Um, here is actually really important.

[00:07:43] So you'll see, this is the mathe that came with the box. So this is the original mathe. Let's get the camera going here too. No, it's alright I can do it thank you. This way. There we go. So the mathe, they have original Ege matthes with Ege's um, letter press descriptions that he printed and wrote himself. They're full of misinformation. That's okay.

[00:08:09] Um, but what's what, um, the SBU archivists have done is as they were that's there we go. They kept the matthes, but they protected the leaves with acid-free paper. And that's because these matthes are highly acidic. They're really toxic for books. Um, but the matthes are really important for the history of these leaves.

[00:08:33] So this is the earliest leaf in the box. It's from the 12th century, it's a Bible, a gloss Bible. There's some gloss on the side and sometimes inter-linear, linear, inter-linearly, there's the inter-linear gloss. So this manuscript is Ege number one. You can see the tape is still there. This tape is really hard to remove, uh, and it generally is one of the signs that you're looking at an Ege leaf, because when you see this horrible white masking tape, uh, one of the great things. Oh yeah?

[00:09:03] **Dr. Joshua Teplitsky:** I'm struck by just looking at the screen and looking around I'm struck by how hard it is to tell how small these are. Would you like a dollar bill or something for scale?

[00:09:11] **Dr. Lisa Fagin Davis:** Maybe I'll put my hand there, for scale. Uh, but

you're absolutely right. This one is fairly, fairly small. You can hold it up that way. Those of you playing from joining us from home, you can see how small it is. One of the great things about this particular leaf is that it has a folio number on it. So that's really helpful if you're going to try and, and remediate this destruction, it's helpful to know what, uh, what has been, what has been done.

[00:09:39] So I'm actually gonna skip, we're going to come back to this one. This one is one of my favorites. This is number 14. Absolutely stunning. Let's have the document camera back, please. So that we can share this with the world. Absolutely gorgeous. Late 13th, early 14th century Carthusian Bible, there it is kind of, it's hard to do this.

[00:10:04] There it is. So you can see this is a leaf from Deuteronomy. Every single page has this beautiful, beautiful border decoration. Lovely. Going down into the margin with these little trefoil leaves. And then, uh, the initials are all, uh, gold. They've all got gold leaf. Some of them have little animals and creatures in them.

[00:10:26] Uh, and the reason we know it's Carthusian is because of this "P" in the margin, these marginal letters are, uh, typical for a Carthusian use because they tell you when the lessons for particular times of day, are to be read. Then, it's a Carthusian, um a Carthusian pattern. So this was a very beautiful, a very beautiful manuscript.

[00:10:50] You can only imagine what that must have looked like when it was whole. Thank you very much. Uh, and then this one is another one that I like very much. This is number 30, a very beautiful, uh, early 15th century Book of Hours. Let's go back to the document camera. Look how stunning that is just beautiful.

[00:11:13] Really typical early 15th century. Border decoration these little vine yes. It's very to- oh thank you, Sarah Lipton, ladies and gentlemen. Um, and so this is very, um, yeah, sure. I'll take a dollar bill. Thank you. Look at that. I'm getting paid. There we go. So now we can "can we get back to the document. There we go. So now you can see, you can get a sense of the scale.

[00:11:40] That was a good idea, thank you. So this one is very typical, early 15th century, these little skinny vines called rinceaux uh, have started, are taking over the whole border uh, with little flowers and things. And as you get later in the 15th century, these become less pronounced and get taken over and replaced by different kinds of border, uh, decoration.

[00:12:03] Uh, so the last one that I want to show you. I'll give you your dollar back sir. Thank you very much. The last one I want to show you is the one that I am most interested in. Uh, and that is my, my very dear friend the Beauvais Missal, which is number 15 in the box in every one of these boxes. There is another leaf of the Beauvais Missal.

[00:12:25] So here it is. And can we have the document camera You can admire it for yourself. It is an absolutely glorious manuscript, every single page, with these initials that have, uh, these tendrils going out into the margins, beautiful decoration inside the in-fill alternating, sort of a light salmon and blue with gold balls.

[00:12:49] And on the other side of this leaf there's this fabulous dragon, this little creature right there. Uh, sort of a bird-like dragon that, uh, what's that? There we go. So you can all see that. So this is. My favorite manuscript that Ege uh, dismembered. And it is the subject of my, what I'm going to be talking about for the rest of today, uh, is the work that I'm doing on this particular, uh, on this particular manuscript.

[00:13:20] And I will also say that I've, I've spent a lot of time with this manuscript digitally. And this leaf I've known very well for a long time. Today is the first time I've seen it in person. And it's so nice to get to meet it. It's like meeting Twitter friends in real life. Just so lovely to get to say hello to it in, um, in person.

[00:13:40] All right. So, uh, I'm just going to leave it open so we can continue to admire it while we move on to the next, how am I doing? Did I trip? No. Okay. All right. So. Now, this is the real test as we do a live demo of IIF functionality. So back in the early, say 2000s, uh, Barbara Shailor, who was, uh, who had been at that point, the director of the Beinecke Library, who was a really esteemed great important manuscript scholar had wrote an article where she said, someday, we are going to be able to use electronic technology to reconstruct these manuscripts online. She had this vision and now in fact, uh, we can the first, um, let's see, oh, I meant to show you that this is an article that Ege published where he proudly referred to himself as a biblioclast.

[00:14:47] And he did this because he was raised a socialist that he thoughtâ€“ you think it's ironic right? He was a capitalist, so on one hand, making all this money, but on the other hand, he thought that it wasn't fair that the really rich institutions should have all the manuscripts. Why should JP Morgan have all the manuscripts? You get a leaf, and you get a leaf. So look under your seat. Everybody gets a leaf. And that was his philosophy. That's why he proclaimed himself. He said he was doing, doing something for the good of humanity. And the truth is it was a terrible thing he did. But there's no way that Stony Brook University could buy 50 whole books.

[00:15:26] But if you have this 50 leaves uh, for teaching and for, uh, and for research, certainly doesn't excuse what he did, but it is a consequence of his, um, of his actions. So after Barbara wrote her article, this website was set up at Denison University in Ohio where this process sort of first got started and, um, Fred Porcheddu, who did this sorted, um, hosted images of the different leaves of the, um, from this "50 Original Leaves" set.

[00:16:05] So here, for example, is the Beauvais Missal page from Case Western

University. Now this is not an interoperable website. You can't do anything with these images. You can download them if you wanted to, but there's no, it's a gathering place. It's not a reconstruction. It's not, it doesn't really allow you to start putting the pages in order and to think about what, what this manuscript was before it was dismembered.

[00:16:35] So this was a great start but it doesn't quite get us where we want to be. The thing that does get us where we want to be... am I on six now? I am â€“ is IIF. The International Image, Interoperability Framework; international, obviously it is an international, uh, um, project, resource image has to do with what we do with images, interoperability.

[00:17:03] That's the key, key word in all of this. So interoperability means that you can do something with these images: you can share them. We can put them somewhere else. We can use them. They're open access, but they also uh, allow you using just a persistent URL to share the image. And I don't mean "here's the URL, click on it in a browser. You can go look at it." What I mean is that you, so you don't go get the image. The image comes to you. Meaning that when you use a IIF persistent URL, the image is drawn from the server where it is housed and appears in the shared canvas viewer that you are using. So you don't have to download the image and then upload it somewhere else.

[00:17:57] You just use that URL and the image appears when you want it. So the image is stored in only one place. It's curated by one institution and it can be used by an infinite number of people at the same time for their own purposes, by mirroring the image into a particular kind of a viewer. So I'm going to show you how this works.

[00:18:25] So what, um, what SBU has done. Here we go. So what Stony Brook has done here is a role model for other institutions, I, you, I point people, I direct people who want to understand what IIF is and how it works. I say, go look at what Stony Brook has, has done. So what we're looking at is the Beauvais Missal leaf, on the Stony Brook server should be served through IIF, and this is the Mirador Viewer, but if you scroll down, it's also a library record. So it combines the embedded viewer with all of this very rich data. Now, the way that IIF works is the code that underlies the image, which is called the manifest. The manifest has embedded in it, all of this metadata. And so when you mirror that image into another viewer, all that metadata automatically comes with it.

[00:19:28] You don't have to repeat it. You don't have to rekey it. You don't have to make up your own metadata. It's all automatically follows the image because it's embedded underneath in the backend. And I can show you another thing that, that the SBU records do really well is they make it really easy for you to find that information, if you want to share this image through mirroring, all you have to do is go here where it says "IIF manifest" right there, click on that. See if it opens in a new. yes, that's all right. And what you wind up with is all of this gobbledygook. You don't have to know what this is, you know what it is, but he knows what it is.

You don't have to be able to parse this. You didn't have to be able to know what this is, but what it actually is, is not just the metadata, but all of these other instructions about what the image, how the image is going to look.

[00:20:26] Well, what you need is just this up here. That URL is what you want. So I'm going to copy it. And then, I'm going to jump over to my next, this one. Yes. Okay. So this is the Mirador demo site where that allows you to kind of play around with IIIF. And kind of experiment for yourself and see how it works.

[00:20:51] What do you want to do with it? So, what I am going to do is I'm going to go here to add a resource. Then we jump down to the bottom resource and then I'm going to paste that

[00:21:07] I check and then the magic will happen. There it is. I click on that. It has now been mirrored into this viewer, so I didn't have to download anything. I didn't download the images. I didn't do anything to them. All I did was use the persistent URL for the IIIF resource to add it into this viewer. So I'm going to close that and you get rid of, there we go.

[00:21:35] And can we can then, uh, we can see exactly what we've done. What would I really want to show you is up here? We can see, this is all the data that travel with. Um, because all of that information was embedded in the manifest. So if there would be changes to be made, they only need to be made once. The holding, the holding institution can change the manifest and it will automatically be updated by anyone else who uses the manifest it automatically happens.

[00:22:09] It just automatically is, is funneled into the viewer, which is a really great feature. Because what you don't want is 30 people using the same image with different metadata. Some of it's outdated. Some of it's not this way. It's all in one place. There's only one person responsible for it. Uh, and it can be easily updated in any context.

[00:22:33] Now, the other cool thing that, uh, let's, let's go back to, is this the one yes, here it is. So I'm now going to, uh, let's look at... Okay. So this is the website for University of Colorado at Boulder, which is also IIIF compliant, serving images with IIIF. This is their Beauvais Missal. If I want to start pulling these Beauvais Missal leaves together, IIIF makes that really easy.

[00:23:09] So the trick, of course, is sometimes finding the link to the IIIF manifest because it can be hidden in all sorts of interesting places. So we're looking around on this page and we're going, where's the IIIF manifest. I don't see it anywhere. Well, I happen to know it's up here, click share there's the IIIF manifest. So then you can copy it, back to here, add it.

[00:23:41] Let's add it down here. Resource the, and there it is. And now when we click on it now we have two side by side. It's really exciting. And again, I didn't have to download anything. All I did was use that URL and now that image has

been pulled in to the viewer, when I asked for it. Let's do another one. So now let's look at...

[00:24:07] This is University of Minnesota also IIIF. Where is the IIIF manifest? I don't know. We'll find it. Keep going, keep going. Keep going. Oh, wait, way down here at the bottom. There is a triple IIIF logo. It just so happens. And there's a link to the JSON. So if I want to click on that, Ooh, there's the JSON, up there is our URL that we want.

[00:24:37] See, I'm not really a Mac user, I get this wrong. There we go. See, come on.

[00:24:51] So that's, so I now have that URL. I can go back and do it again. I can do it any number of times, as long as I can find that persistent URL, I can keep adding windows until I have as many as I want. Now the trick is is that where we are? That's the one. But, uh, that's Harvard's, here we go, this is what I wanted to show you. The trick is when you have an institution that is serving their images using IIIF “ and you know that they are because someone told you they are, but there is no IIIF link in this record, anywhere. Yeah. So this is the National Gallery of Art, their Beauvais Missal leaf. It's a very beautiful leaf, but how am I supposed to use, take advantage of IIIF functionality and the whole point of IIIF, of serving images using IIIF, is to make them interoperable is to allow people to go get them, to go get them, to use, and do things with them.

[00:25:54] So then you have to figure out what the JSON is. And there are a few ways that you can do it. Every institution that uses IIIF puts together something called an API, which is basically a set of, it's like a set of rules that let you piece together what that URL is going to look like, what the template is for that persistent URL that you are looking for. A better way to do that is to inspect the page.

[00:26:22] Let's go behind the scenes, see how the sausage is made.

[00:26:35] Now we'll go down here and do search, do a search for JSON and we keep going until we find the right one. All right. So way down here. There is a very long lengthy line of code that happens to include the JSON that we're looking for manifest URL. And I only know that because I know what these things tend to look like, and if we go here now, and we're going to edit, I'm going to edit the HTML so that I can pull out the manifest URL.

[00:27:15] All the way to there, then I can copy it, then I go back, here“ add resource down here. Paste it, and God willing the creek don't rise.

[00:27:37] So now we've got all these different ones. Well, that's the one we were just looking at, darn it.

[00:28:09] Oh no, there it is, sorry, it was already there. So now we have all these

images in one place and we start comparing them and contrasting them and figuring out what order they go in, and trying to put this manuscript back together. Now the, that was a lot of work. It was complicated. Uh, fortunately Fragmentarium this amazing resource Fragmentarium.ms â€œ

[00:28:39] does all the work for you. So you don't have to go digging around and trying to find all the manifests. So Fragmentarium is this amazing resource that has been developed in the last seven, eight years that allows you to it's a, a data model that's specifically designed for manuscript fragments. So it includes fields that you wouldn't necessarily look at or find in a description of a whole codex.

[00:29:07] Um, and it allows you then to take advantage of IIF functionality to put these records in the correct order it's really cool. And then once you've got this. You can then start exploring and you can start looking at the different, uh, the different parts of the manuscript. We can see how leaves are, uh, consecutive or not, where there are leaves missing and start exploring the content and learning about these manuscripts in a way, just one leaf â€œ one leaf doesn't tell you anything useful about a manuscript, you know, I mean, I can look at that leaf of the Beauvais Missal and say, well, it looks like it's from the same style.

[00:29:53] It looks like it's, you know, late 13th century, late 13th century France, I don't know anything else. That's only one leaf, give me 111 leaves, which is what I currently have. I can tell you a lot about the manuscript that I could tell you a lot that we didn't already know. Uh, this is a touchscreen and I just have to do this because I can't resist and it lets you move things around like that.

[00:30:16] Click and drag you can actually be reorder the leaves. Totally messed it up and then had to go back in and fix the order now. And then you can also, um, zoom through, scroll through the manuscripts, leaf-by-leaf like this. And I have it open here to the, uh, SBU leaf. So this is that leaf and it shows how it fits into the manuscript.

[00:30:45] What I discovered about this leaf in particular, is that it is, or used to be consecutive with the leaf that now belongs to the Smith College Museum of Art. And so that's right here. So here is the hold on I'm going to use the touch screen again. If we we do that. Hopefully that will get us what we want did that work. There we go. So here we've got the verso of the Smith college leaf. And the recto of the Stony Brook leaf. Now that's pretty cool. So now we can actually see how the text goes is uh consecutive and you can also, I don't think we're going to be able to, to, to zoom in and do this, but on the recto of this leaf. Ooh, can we go back to the document camera?

[00:31:39] Because this is cool. There we go. Ooh. Okay, doc cam. Let's see if we can see it. So right here. So I'm not looking at this. This is show through from the other side, way up here, really faint you see that right there. There's a sort of a faint shadow that looks a lot like, like this, what it actâ€œ what that is, is an offset and it matches up.

[00:32:08] You can turn off the doc cam. It matches up. Perfectly. With that, because when the book was closed, that was smushed up against this leaf for hundreds and hundreds of years. And I just didn't know for hundreds of years. And so it left this, um, this kind of shadow this ghost, uh, here that matches up perfectly with, um, what we saw on, uh, on the other leaf, uh let's see, with thisâ€“ right there.

[00:32:44] So that's really important material evidence, things that you can, that you can, find but the other piece that's that, uh, that has come out of all of this is that I'm also trying to reconstruct part of what the manuscript would look like in three dimensions. What the structure of the manuscript was. So the way that medieval manuscripts are put together, It's like when you were a kid - you stacked a bunch of pieces of paper and folded it through the middle and staple it, you made a little booklet.

[00:33:15] That's basically how many medieval manuscripts work, what Otto Ege did, and his ilk, they took those conjoined pages known as bifolia and they cut them in half. So you had two leaves instead of what was originally a one you know, two separate leaves instead of one bifolium, now because I'm able to, because of clues in the manuscript, I'm actually able to do some reconstruction reconstructing of the physical properties of the manuscript. So go to the next one. Let's see where are we is it this one. There we go. So now I'm using, I see Dot Porter. I see you. This is a. Um, a resource that was developed by Dot Porter, of University of Pennsylvania. And I see her over there on Zoomâ€“, um, that allows you to visualize the collation of the manuscript and by inputting various criteria and images and information, you can piece quires back together.

[00:34:23] And that's what I've done here. And way down here. in, this quire right here, this is, uh, Stony Brook University. Right here. This is the Stony Brook leaf. There it is. And I've used IIF to import these images to mirror these images right here. I've used your IIF manifest URLs to make these images appear here.

[00:34:47] It was extremely cool and what you can see right here. So here is this is the central bifolium of the quire where the sewing was this leaf at, Stony Brook was once not only consecutive, but actually conjoint with the leaf at Smith College Museum of Art. So they were originally like this until Otto Ege cut them apart.

[00:35:12] These two leaves, haven't seen each other since 1942. And they spent hundreds of hundreds of years as neighbors side by side, squished together, loving up on each other and they have, they're now separated by hundreds of miles, but they originally were in fact, one piece of parchment from the, from the same core sheet.

[00:35:31] Uh, so that's been a really exciting outcome. Uh, and like I said, I was able to use IIF functionality to mirror the images into the, uh, it's called VisColl, is

the name of the application. This is the VC editor. Uh, so I was able to take advantage of IIIF functionality to do that. So the last thing I want to show you is kind of backend.

[00:35:59] Let's see. All right, let's go. What's next? Oh, this is the last thing I see. I keep saying it's the last thing, but it's not the last thing, because there's so much talk about what are you supposed to do when the Smith College Museum of Art isn't using IIIF at all, what am I supposed to do about that?

[00:36:20] Well, they're not going to convert to IIIF because I wrote them and said, would you please convert to IIIF, I didn't do that, but I didn't do it. So here is what you do. You use your own IIIF hosted server. Uh, and so what I have done, I've already, I did this in advance it's like now I'm going to reach into the oven and pull out the fully cooked cake to save time.

[00:36:45] So I, what I did was I downloaded this image from a website and I uploaded it into this website.

[00:36:53] IIIF Hosting dot com. IIIF Hosting allows you basic person out on the street to for free upload a certain number of images, and they will serve them as IIIF images on your behalf. There's a limit to that, but then there's a paid service too, if you want to, uh, if you want to have more IIIF images. So once you have uploaded a IIIF image, if you click right there, where the little eyeball is.

[00:37:24] There's an image and way over there in the corner is the IIIF link â€œ click info_json. And it will tell you your own personal IIIF JSON, that you can now use to reorder this image into any, uh, shared canvas viewer that you, that you want. So even if the institution that you're with, that holds the images that you're interested in, doesn't have IIIF or isn't using IIIF, it's not the end of the world because you can do it this way. You have a question?

[00:37:58] **Dr. Joshua Teplitsky:** Oh, will they be happy about that?

[00:38:01] **Dr. Lisa Fagin Davis:** Well, yes. Well, I probably should say we do need to check the rights, right? You do have to check and see if it's an open access image or not anybody who's anyone who, who is, um, doing it right, is they are open access images. If it's an open access image, then you can do what you want. Thank you from the â€œ this is the fine print. That's a very important point that you can't just take any old image and do what you want with it. Uh, and then there really is only one more thing I want to show you, which is, this is the backend at, Fragmentarium, this shows you what these reconstructions look like, and I'm going to close, switch to a different tab...

[00:38:45] I'm actually going to close that because it's not important for our purposes. Ah, there we go. So now you can see all the images of all the Beauvais Missal leaves that I found that were originally 309, I'm up to 111, gotta find them all, gotta catch them all. So if you see them on somebody's wall I

suspect that a lot of the ones that I don't have either, uh, didn't have any initials.

[00:39:12] And so they had been simply discarded or are in private collections, hanging on people's walls. So keep an eye out, find them, please let me know. Um, but this is where you can arrange the, the images in any way that you want, so if I wanted to, I could take this one. If I decided that like the recto and verso, were backwards that I need to switch it.

[00:39:35] I can do that right here. I can just click on it and move it. And that's very, uh, good, powerful and very handy. The other thing, the thing that Fragmentarium does, or one of the things that the website does, that's really great is that if you upload an image, so you can either, you can use IIF to mirror images into Fragmentarium, or you can upload an image in which case they are serving through IIF.

[00:40:05] So every image uploaded into Fragmentarium gets a IIF manifest. So I can now mirror those images in other ways if I want to, and it just goes on and on and on and on and it is IIF. It makes it possible “ the end. I think that's it.

[00:40:24] Thank you to those of you on Zoom and to those of you in the room

[00:40:36] Yes?

[00:40:37] **Audience member:** How was Ege able to acquire these manuscripts to begin with, to discover them?

[00:40:44] **Dr. Lisa Fagin Davis:** Um, so the question is how did Ege acquire the manuscripts that he took apart, which is a great question. So a lot of different ways, mostly through he was buying at auction, these things were a lot cheaper back in the twenties and thirties. He wasn't buying the kind of stuff that JP Morgan was acquiring, or that his library was acquiring.

[00:41:01] Um, you know, they're buying, Lindau Missal then, it's, you know, these extraordinary works that are on display right now. Uh, if you go to the Morgan Library, that its “ that's, um, but he was buying manuscripts that were lower quality, uh, because they were more affordable. He also had a business partner. He worked with Philip Duschnes who was a book dealer in New York.

[00:41:23] And so between the two of them, uh, they were sort of in cahoots buying manuscripts and breaking them up and sort of dividing, dividing up the books, uh, amongst themselves. And one of the things that I'm that I'm “ that I'm trying to do, I I've now done or been a principal investigator for seven or eight reconstructions, my students at Simmons, do one every year and we're gonna and we're going to start working on number 31, uh, next week and, um, one of the things that's come out of it, which I think is kind of interesting is that for the books of hours that we've done. So we did that for number 30. Uh, we've done several books of hours “ almost all of the books of hours that we've done have

a huge, uh, uh, the vast majority of the leaves that survived were from the second half of the manuscript.

[00:42:12] They come from the back of the book, which makes me think that maybe Duschnes kept the ones from the front. He took out the ones he wanted and then passed the rest on to Ege, I'm not quite sure yet how that's gonna play out, but that's a pattern that seems to be developing, which is another. If another outcome of this kind of work is that starting, starting to get a sense of how this practice worked how Ege did this work, what exactly he was doing and why and how, uh, which is, uh, interesting too I think it's an interesting outcome.

[00:42:45] **Dr. Sara Lipton:** I want to ask a little bit of a devil's advocate question, um, which is not really a serious pushback, but the text of a missal is a pretty standard outline so a lot of the lining up and organization, presumably it could have been done on the basis of the text. I mean, obviously the central bifolium is, the easiest as you can just see that it continues obviously cover to as you go on. Can you tell us about specific things that the software allowed you to do that couldn't have been done? Maybe more laboriously?

[00:43:18] **Dr. Lisa Fagin Davis:** Oh that could absolutely be done more laboriously. There's no question about that. I know for my dissertation. thirty " ha " thirty years ago more than that, was a reconstruction of a dismembered manuscript, but I did it using, you know, photocopies and scissors and paste and glue on floor of my living room, trying to, to put this book back together so you can absolutely do it in a more, laborious way.

[00:43:46] You do it like this, number one, it allows you to very easily make changes. If you decide that what you've done is wrong, or you want to insert something new. My reconstruction that I did for my dissertation, which was also my first book on the Gottschalk Antiphonal, it was out of date the second it was published, right?

[00:44:05] If I published this in print for the first time a new leaf comes up, my reconstruction is already out of date. Right? So this doesn't get out of date. This is instantly can be updated. It can be corrected. You can add, we can subtract, uh, you know, that's the real joy of doing it in a digital environment is that you have this opportunity to continually, um, grow the uh, grow the project.

[00:44:36] **Dr. Joshua Teplitsky:** Thank you so much for this. Um, I'm trying to follow your steps. I can retrace them on my own and I'm not fully confident that I could and was wondering where I could go to have my hand held...

[00:44:50] **Dr. Lisa Fagin Davis:** Go to the digital lab, go to the Center for Digital Humanities at Stony Brook University, because they know what they're doing. There's a lot of resources online. If you go to the IIF " iif.io website, there are resources there. Um, there are, there are lots of, sort of, it sort of depends on what it is you want to do, right.

[00:45:12] **Dr. Joshua Teplitsky:** Uh, okay. So for instance, I work on a digital humanities project called "Footprints: Jewish Books Through Time and Place".

[00:45:18] **Dr. Lisa Fagin Davis:** I know that project!

[00:45:20] **Dr. Joshua Teplitsky:** And so one of the things, the project is sort of user driven and users can take it a number of different directions, but I'm interested in reconstructing dispersed libraries. So we have six 15th century books. Print matter that have the signatures of censors. In Italy, Catholic censors-

[00:45:39] **Dr. Lisa Fagin Davis:** Ah interesting!

[00:45:40] **Dr. Joshua Teplitsky:** Who have expurgated the printed matter-

[00:45:41] **Dr. Lisa Fagin Davis:** Yeah yeah like the one who signed the Sarajevo Haggadah

[00:45:44] **Dr. Joshua Teplitsky:** That kind of stuff, exactly exactly um, and so it's, it's quite exciting to try to reconstruct those scattered books into moments of their initial collection. And I'm trying to imagine if, if a software like this might be useful in aiding that kind of pulling together or had implications for, uh, 20th century questions about, uh, diasporas, and dispersals and genocide and cultural "reconstruction".

[00:46:14] **Dr. Lisa Fagin Davis:** Yeah. So one thing that IIF is really good for is side-by-side comparisons, right? That it allows you really easily to take this from here and that from there. So we wanted to look at these, um, uh, these censor inscriptions, you know, you could pull a whole bunch of them into one space and compare them.

[00:46:32] There's also an annotation tool uh, in Mirador, so you can start annotating and transcribing you know, sort of the more you explore the more you'll see, there's an awful lot of, uh, uh, really cool, uh, applications, uh, you know, that you can, uh, and because it's an open source application, there's not a whole lot of, I mean, there are rules.

[00:46:56] But there's a lot of flexibility for how you construct the manifest and what kind of data you put into, uh, into that manifest?

[00:47:05] **Audience member:** Could you tell us who developed this?

[00:47:09] **Dr. Lisa Fagin Davis:** Uh, so, um, well Ben Albritton certainly had a lot to do with it, but there, there is a whole team of IIF people. It's not just a medievalist toolkit. I mean, it's used all over the world for all sorts of things.

[00:47:21] Uh, I find it very handy for, to use for medieval things, but it's used for

all sorts of things and it's being adopted by more and more institutions, I think on a daily, daily basis. Are there any questions on Zoom? I haven't been able to see the chat

[00:47:40] **Chris Sauerwald:** None so far, none so far

[00:47:40] **Dr. Lisa Fagin Davis:** Ok, what's happening in the chat? Can you save the chat for me? I'd like to see it, yeah ok thank you because can't see it from where I am but I've seen those things in the chat.

[00:47:49] There are no questions, though in the chat.

[00:47:51] **Chris Sauerwald:** Not so far.

[00:47:51] **Dr. Lisa Fagin Davis:** Okay good. Alright! Uh, any other questions here in in real life? I haven't even been keeping track of the time. We're probably out of time now.

[00:48:02] **Chris Sauerwald:** We still have 10 minutes.

[00:48:02] **Dr. Lisa Fagin Davis:** All right. Well, that's all I have.

[00:48:06] **Audience member:** So when the institution isn't using IIIF, *** unintelligible ***. Would you consider copying that data from that institution?

[00:48:27] **Dr. Lisa Fagin Davis:** Sure, if it's open access, you know, if they've only "if they, it depends on what their rights statement is right if their rights statement allows that then. Absolutely. Um, yeah, if the, if the image is open access, then the metadata almost always is too so yeah, definitely. You can uh, you can do that.

[00:48:45] **Dr. Sara Lipton:** Can you modify these images because I see that obviously like you know the coloring it varies depending upon the "if they, it depends on what their rights statement is right if their rights statement allows that then. Absolutely. Um, yeah, if the, if the image is open access, then the metadata almost always is too so yeah, definitely. You can uh, you can do that.

[00:48:50] **Dr. Lisa Fagin Davis:** Right. So you are, um, you are limited by the quality of the image, just because something is a IIIF image doesn't mean it's a high quality fantastic image some of these images are terrible, right. So you can edit it on your own and then upload it or, you know, but if it's being served the way it's being served as the image that it is, um, so the Stony Brook images are amazing props, props, really high resolution, beautiful images.

[00:49:23] You can zoom, zoom, zoom, zoom, zoom, uh, and some of these images are terrible. Some of them are images that private collectors took on their phones and emailed to me. Some of them are images I took with my old phone 15 years ago. It is kind of a random assortment there there. The expectation of top quality images is something that now that I've had to let go, because some of these are just not, they're just not very good images and there's just nothing I can

do about that.

[00:49:51] You know, I mean, some of them I can edit, but then you would have to reupload them. You know, you go back to the Stony Brook imagesâ€“

[00:50:05] You can see how "zoom-able" these images are they're really fantastic. We don't need to use the document camera, these you can zoom into really well.

[00:50:22] **Chris Sauerwald:** But it does let you . See that â€“ seeing them in person, lets you see the scale of them in relationship to each other.

[00:50:30] **Dr. Lisa Fagin Davis:** Yes.

[00:50:32] That's a good place to leave it.

[00:50:33] **Dr. Sara Lipton:** Can I ask another question?

[00:50:36] **Dr. Lisa Fagin Davis:** Of course!

[00:50:37] **Dr. Sara Lipton:** Um, obviously you must see Beauvais Missal leaves in your sleep

[00:50:42] **Dr. Lisa Fagin Davis:** Yeah a good friend of mine refers to it as the "Beauvais effing Missal"

[00:50:45] **Dr. Sara Lipton:** Have you ever been stumped by a leaf does someone call you and say, this looks like yours and you can't tell by looking at it, whether it is or not.

[00:50:55] **Dr. Lisa Fagin Davis:** I've had leaves come to me where someone says, look, it's a Beauvais Missal leaf that I can say no, it really isn't I can tell because of the script, the style, the size, the size is really the end for a single leaf.

[00:51:07] It's not the size of a leaf that you're interested in it's the writing space, because that's like, that's like a fingerprint in many ways, things could be trimmed but the writing space is where I exist. Um, I have leaves where I don't quite know how they fit. I've had trouble identifying, you know, it's a long lection.

[00:51:26] Sometimes it's hard to tell what, what exactly it goes with. Uh, it's hard to know what order the commons section is in, uh, hard, they're all a bunch of special masses and still don't know for sure what order those go in. So there, there are definitely places where as I get more leaves to fill in the lengths, I always have to really think, you know, oh look, I just found this leaf. Well, that means that leaf must go over there. You know, so it's like a jigsaw puzzle where you don't have a big â€“ like doing a jigsaw puzzle without the picture.

[00:51:56] **Dr. Sara Lipton:** But basically you can look at it and know at this point?

[00:51:59] **Dr. Lisa Fagin Davis:** At this point, oh yeah, for sure. Yeah. No I, I see them in my sleep.

[00:52:03] Um, I actually own two. I own two of the now, um, two leaves came up at separate auctions in the past year, uh, at auction houses who misidentified them and really undervalued them. And so my husband and I decided that we would, that we would acquire them for ourselves, rather than see them disappear into a private collection, wherever. Um, so now they're hanging in my office next to my desk, to inspire me.

[00:52:30] Thank you all so much. Thank you. Thank you. I'll see you on Twitter