

Data Curation Profiles Symposium 9/23/2012

Panel 4: Opportunities

[4:26:49]

SB: ...Behind the scenes and we'll bring him in at 1:30 as negotiated. This panel is on opportunities in the data curation landscape. Again, our attempt to try and provide context around data curation profiles and the toolkit. So looking forward where is the profession going? What opportunities are there for librarians to get involved in data curation? How have you seen or how do you see the data curation profiles toolkit helping in this area? And we'll start with Helen Tibbo, Dr. Helen Tibbo who is at UNC-Chapel Hill, and we'll have Rachel Frick at the Digital Library Federation, and then we'll bring in Chuck Thomas from the Institute, and Museum of Library Services. Helen, you want to go>?

HT: Sure. And I should say that Rachel is a [inaudible] alumna, so it's a big Carolina, oh and so is Chuck.

RF: So is Chuck. We're all Carolina fans here today.

HT: So we might have... So we'll see how that goes. Whoops! We need our questions back. [Questions appear on screen] Okay, so, just um, I could be on a soap box for this for a long time. Um and... Okay so 15 minutes. Both the library and the archival communities need to move forward in becoming adept and embrace digital content.

RF: [inaudible]

HT: [Laughs] Um and I still see a lot of students who come to me and I had one come just come just a couple weeks ago, brand new student who wanted to, she said, "Oh I don't know if I need the whole, the whole archival and records concentration. I want to be an archivist in a public library and look at local public library history records." And I kind of looked at her and said, "Well it's alright if you don't actually want to bring home much money in your paycheck if that's your goal." Because she is going to a two year top of the heap program, that didn't seem like the best choice perhaps. And then she said, "Well what about local historical societies?" and I said at that point, "You will then volunteer." And I guess I tell that story because um, and I saw some grimaces earlier today when I said we've turned that around and we teach the archival students about digital first and digital as the primary way that we create content today. It's—studies have now shown it's something like 99.9% of all content in the world is being produced digitally. Yes, we do still have paper, but I see the library field even more so the archival field, folks in the professions, it's hard to go from what you've been doing for a long time to a new reality of digital content. And I think for both librarians and archivists to be relevant, that's going to have to happen. And I think that's maybe not such a problem with students, but I think it's a greater problem in the work force and I heard Jake a few minutes ago that we did a one day workshop because we have to low barriers to get people into continuing education. That's great and I think maybe that was enough for this, but I truly question what you can do in a day. I was the driving behind the society of American archivists digital, uh archivists, uh Digital Archives Specialist certificate. And that's a combination of a bunch of workshops. More than a day and you have to take numerous of them, but

still, it's a small time to learn. Right? And when you consider many people in the work force of not being in the school for decades and that most of this is novel in that sense if they've not been doing it and there's not time in institutions set aside for this. So I would say this is not the archivist or library on the line's, fault, problem, whatever. But management of our institutions that know you can't have the afternoon. No you can't go there, no there's no travel money, no we're not going to invest in you, and I think that is one of the real challenges for the field, fields to go forward with digital content. And we can all talk and we can all wave our hands at this and say this is good, but if we don't have more commitment, I don't know how it's going to go forward

RF: I think it's more interesting if we're having a conversation than just talking. But don't you think that's why this is a really exciting opportunity because it's actually, it's not, I think when you see someone developing a silo of service or hurrying the data curation person. You can say well that one's going to fail. I mean if it's, it's when people realize the strategic opportunity and when people in our libraries it's the leadership moment to express the vision—

HT: Absolutely.

RF: —that this is a priority and we have to change the way we work, we have to make this invest in the staff, we have to be honest about the limits of retooling, we have to make sure people are in our organizations and that they're successful in the positions that we put them in. So just to kind of just feedback off of what you're saying. I think we're saying that the leadership moment is here so.

HT: Um okay.

RF: So okay, go ahead. So it's the opportunities, there we go.

HT: so there are immense opportunities and I agree, I don't think the person who went to the one day workshop who doesn't really have time because it's not in their job description to do a data curation profile, let alone all of these other things, they can't do that by themselves. It really has to be a sea change, a cultural change within library and archival science. And I look at both of them in there.

Um, I think, I think that's happening a little bit in some places definitely. And I think as that happens and other institutions see the leaders and what's happening in those places, and I'm thinking of John's Hopkins, what Sayid's (?) doing there, I think the field will move along, but damn it seems slow to me.

I think something like the Data Curation Profiles Toolkit is a wonderful tool. I used it as a class assignment last year in the data curation and management class that I teach. I think the challenge for the students there, and it may be the challenge for many professionals too, is actually to leave their offices, and in the students case to leave their little cocoons, to go out and talk to a researcher in some discipline that was not their discipline and about their data. So there were a lot of unknowns. I think that took a lot of courage on the student's part. Um, Callie (?), and myself, and a doctoral student Jewel Ward(?) have used at least some of the questions from the Data Curation Profiles Toolkit in the Datanet Federation Consortium Data Net Grant that we have at UNC that Regan Moore is leading. And the goal of the project is to develop software that will help support federated storage and use of manipulation of

data form a bunch of different sciences and allow people to share and to use data interoperably from a number of sources. We have been, so far, looking primarily at a number of hydrologists and trying to talk to people who use at least two data sources in a given project. So what are the problems of metadata and interoperability and bringing those two things together. Our difficulty has been that we could not be—go to their lab, go to talk to them in their office, go to look at their computers because these people are all across the country. So we've taken this um, we couldn't talk to them for two hours because—we tried at first—we said will you give us two hours of your time? And no, nobody responded to that. So we got our hydrologists partner on the project to get his, you know, people at least who he knew. And cut that down to an hour. So it's hard to get people's attention. I think with the data curation profiles, you have great advantage because they're on your campus and you're going to do something for them. We ultimately are supposed to be creating software that will help them, but that's pretty removed from the process. But I think one of the things I would like to see is more interaction with tools like this that are created with other projects, and I'd like to see the library and archival community more actively involved with NSF and NSF researchers. Because folks, that's where the money is. Right? I mean, I guess they were cut this year, but they weren't cut 50% like IMLS. So you got to go to some extent where the money is. And in this case, the people who are concerned with data to some degree is NSF. Um, the office of cyberinfrastructure was just moved back into the computer science directorate, so I don't know what that means. They're putting a smiley face, I'm not sure it's a smiley thing for us, but anyway, I think I'd like to see branching out, broadening out.

[4:37:57]

RF: Alright, I'm just going to, I know we always like to delve down into the details and how are we going to get the work done, but I'm going to try to bump this out a little bit more on that strategic plane and maybe recast on some of the things that were said this morning about where is the profession going. And I do a lot of traveling, so I do a lot of sitting and waiting, so I was sitting and waiting on my way to come here, so I was like what makes this challenge so transformative for libraries? What makes this new? What makes this different? And it's not so much that the data is digital and I don't want to say it's so much that the data are big because I think we've dealt with big collections and we've had digital media, well I don't want to say digital but media that isn't so fixed since the 70s. So for me I think what makes this really transformative or exciting or sometimes very hard to put our hands around is the fact that it's the platform that we're operating in now. It's not a fixed—we're not in these fixed defined roles. We're not dealing in the analog community where it's a one-to-one relationship, this library serves this community here in West Lafayette. You know, our communities, because we're now on the network, people can have many different roles, people can have many different titles on who you're talking to, professional identities I guess to say. And a library can serve many different communities based on the services that they're putting out there. So I didn't know just kind of blipping through twitter somebody was like, "what's" you know, the question about, well you know we already have data managers and then we said, "you know, it just depends on your library, what does your data manager do in that role, in that lab, on that project because you know I know we're trying to find a shared vocabulary and ways to communicate about this, but what makes this tricky again is that this is very individualized down to the project level that we're seeing. So we have to know how to have

conversations and how can we have conversations across the network. I want to kick back to something that was written by David Linekist (?) called the New Atlas of Librarianship, uh the Atlas of New Librarianship, sorry, and he said that the mission for librarians, and I wrote this down because I didn't want to get it wrong, "is to improve society through facilitating knowledge creation in those librarians' communities." So when you think about the role of librarians is being the person that facilitates the conversation and if that's your professional mission as an individual, then it really doesn't matter if you're called a data manager on Tuesday because you're going to the certain lab—and that's the label that they're comfortable with seeing you in, I mean I know it makes it easier to write job descriptions, all that fun stuff, but um, but I think once again the people who are going to be successful and the individuals and professionals who are going to be successful are the ones that are comfortable in the spaces in between. The people who are comfortable in the ambiguity and the people that are comfortable and constantly tweaking what we're doing and honestly the people that are also contributing to this new community, um the work I'm working on at the Council on Library Information Resources in DC in reference to the Digital Library Federation as this community building around this new, we call it a new professional identity because once again it's hard to kind of put your hands around it, but it's more this community identity around a shared challenge that takes quite a lot of different perspectives in order to attack this challenge successfully overtime. [Laughs] So I don't want to say it's a new professional identity it's a new community identity and that involves a lot of different players, it allows, it involves a lot of different personal perspectives. So that librarian role of being able to facilitate conversations, to strive towards shared understanding that go towards standards of practice, standards of excellence, but are also those trusted third party brokers and scholarly communication, I mean that was a point that was brought up before lunch, you know being the broker between the publisher and researcher. I think a lot of times the library is where disciplines meet, it's where different actors and scholarly communication meet. And in this networked world where everyone is shifting identities based on the role that you play in that little bin space in that moment of time, libraries still hold a very trusted and special place in this whole arc around scholarly communication research and the way we create new knowledge. So that is huge capital that we have and so you know, for me that's the opportunity because if we go into the conversation about data curation, as someone who wants to help somebody solve their problem or challenge, or wants to understand about their research and how it's fitting into somebody's priorities around publication, um, I think when you're, when you come as someone who wants to listen and understand and then turn around and say and these are the services that make sense for you here, trying to reach that understanding is more of asset than coming and saying I'm a librarian and we do this. I mean that's, for me, is the diff, the shades of the difference of opportunity and being comfortable in saying, yeah I might have done this before and I'm confident—it was something that you [motioning toward HT] said earlier about archival practice principles, and I think librarian values, why we all come together around this, transfer and are actually really exciting in this data curation area because it's right—it's even more the niche when we published scholarly communication and print because it's really about the tools themselves that create research, it's the raw materials for me. And I really see in the future where research data end up being the product—research product or output of highest value. So you're helping, as long as the data's accessible, reusable, discoverable. So if we're in part of that conversation, I mean, I think that really goes back to the core of librarianship. So that's where I see that,

you know I think we have to be uncomfortable with the ambiguity because it really comes down to the core. I know that's not communicating that quite right.

[4:45:13]

SB: Let's see what Chuck has to say about this as well. Can we bring him on at this time?

RF: Sure! Come on! Why are you bringing him in? I was going to say somebody said this earlier about what does the data curation tools do and I think they're the conversation starter or framer, so that's what I liked about it.

HT: I think it's a confidence builder for the library departments.

RF: Absolutely, absolutely.

HT: I've written down to talk about development of identity and confidence.

CT: He's not there now because he got bored listening to me. There he is! I can barely see you, Chuck!
[laughs]

SB: Can you hear and see us?

CT: Yes, can you hear me?

RF: Yes!

CT: Okay great, everything's working fine!

SB: So I am going to turn you around so you can face your adversar—I mean your panel [audience laughter] members so maybe you can see a little bit of the back of Helen's head here—

CT: Yes, I—

HT: Is there, is there a curtain behind you?

RF: Shut the curtain behind you, Chuck!

HT: You're a little back lit.

RF: Yeah, we can't see your face.

SB: They're saying you're a little backlit, that you're a little hard to see.

CT: Yes, I'm sort of locked into a hardware configuration, um so let me see if I can just scoot closer to the light source back behind here.

RF: Much better!

HT: Much better.

RF: That's much better!

HT: Much better.

CT: Alright, I'll hover close to the laptop.

SB: So we got started a little bit early and Helen and Rachel chimed in a little bit, but we wanted to give you the opportunity to say a little bit and then continue the conversation. I don't know if you can quite see our set up, but you're in the middle, and Rachel and Helen are on either side of you. They said something about a thorn between two roses. [Laughter]

CT: Well hello everyone and thanks for the opportunity to participate remotely. So I'll keep this brief per the instructions that I was given as a speaker and hopefully we can fill in any additional details and answer any questions anyone might have afterward. So, looking at uh what IMLS has invested in data curation-related activities in the past and moving forward and being guided by a new strategic plan that we just start started implementing about a year ago, I thought that I would just briefly cover some of the projects and kinds of activity areas that we have supported recently—I saw you there, Scott [laughter]—and then just outline three particular opportunities that I see from our perspective as the types of projects that we think would be highly desirable and activities that are worth promoting either more or as new types of activities out in the data curation and digital curation arena. So as you all are probably aware, our investment in the data curation profiles work over the past several years as part of a broader effort to better equip libraries and librarians with the tools and capacity to respond proactively to the challenges and opportunities that are presented by digital research data and information. Our investments have covered a variety of activities, such as training programs for the leaders and educators in tomorrow's data curation workforce, research on topics such as studying the ways to preserve a variety of specific types of digital information and data, Helen's work and work of others in identifying gaps between the current theory and practice of digital curation, support of national and international initiatives such as the National Academy of Science's Board on Research Data and Information, and the multisponsored Digging into Data Challenge, which is focused on finding viable ways to identify patterns and new knowledge in massive amount of aggregated and existing data, and then finally just one other type of project that we've funded in the past that's worth mentioning and giving some credit to Purdue for is the Databib Project, I don't know if Michael Witt is in attendance today Scott?

SB: He's not he's down in Indianapolis at the HUBbub presenting on the other thing that Purdue's doing.

CT: Okay. Well, I thought it was worth mentioning here, for those of you that are as familiar with that, I think that that project has great potential. Building an international registry of data repositories to help both data users and data creators to identify places to look for relevant data, but also I think there's some great potential there in helping data creators finding places to deposit their data. So looking for pockets of where similar types of subject and subdomain researchers are placing their datasets. And just last week, I don't know if you all caught the news or saw it through any number of listservs, but we announced our 2012 National Leadership Grant awards and there are six very relevant projects, I believe, that were funded this year that are worth just pointing out very briefly. The first is a planning grant to the University of Massachusetts Amherst and its partners who explore a new vision of what an

institutional or disciplinary repository should be that a surrounds the disciplinary repository with new types of services for collaboration and building in more of the data management and planning activities to help ensure long-lived and accessible data sets. We also made a planning grant award to the University of Kansas and multiple regional partners to explore the feasibility of a consortial data management service that would be shared among multiple universities in that part of the country. We gave a grant to Carnegie Mellon University to develop and test a repository capable of preserving executable content and I think for this audience's interests, in particular, one of the types of executable content that will be placed in there during the initial pilot and evaluation are dynamic data visualizations that are likely to become much more common in coming years in scholarly publishing, so you have not only the final research paper but also the data and then the scripts and other applications that allow you to view the data in different ways, including being able to accommodate updates to data sources if they might be sitting in a place where they're growing and are accessible.

We made a grant to the University of Illinois to develop site-based data curation framework that supports greater decentralization of data curation activities, particularly in small science types of labs so that they will have guidance and hopefully tools that will help them to work their way through various aspects of the data curation and data curation process beyond what they typically would do in a lot of small science sites these days.

We made a grant to the California Digital Library to further develop its young, but already pretty darn successful, data management planning tool. And finally we made a grant to the University of California Santa Cruz to develop what they're calling a "curator dashboard" plugin for the Omeka platform to allow a greater variety, not everything perhaps, but a greater variety of functions that would be considered part of data curation and I'm using the term data very broadly in that particular context. However, I think it's important to say I think that these show that we are investing and have invested over the past few years in expanding the capabilities and capacity not just of libraries, so we don't want all of the work to remain in libraries, we're interested in pushing data curation activities outside and even outside the scopes of professional practice by librarians to involve as many other actors who are involved in the data lifecycle as possible because we, and I'm sure many others, feel that data curation only works in a scalable manner when actors across that full data lifecycle are participating in its management and curation and selection and other activities. So IMLS strongly supports pushing data curation activities out in many directions.

Alright so just moving ahead very quickly here a few opportunities that came to mind when thinking about the work that's already been done with the Data Curation Profiles Toolkit and all of the other related activities that have gone on, I believe that there's still a lot of room and a lot of opportunity to come up with new activities and to continue to push the bounds of library practice and generally information science and data science practice by bringing in new partners and in the same way that data curation profiles work has proceeded subdomain by subdomain, I think that there is ample room in the competitive grants process and the projects that we find to keep working in that manner to translate what has been earned and to take a best practices that are emerging in the area of data curation and taking those two new research fields that have not yet had a chance to interact strongly with libraries and archives in the ways that we're encouraging. A second area that I see a lot of promise for is in taking

what you've learned in building data curation profiles in different subject and topical areas and perhaps building these into performance support desktop tools uh that reflect what you've learned in building data curation profiles and turning that into customized work flows and tasks that correspond to the behaviors and needs of researchers within particular domains, but ensuring that key data management tasks are not overlooked. So we let them do what they need to do as part of their work flows and to meet their needs both for accountability and scholarly communication with members of their own domains or subdomains, but also paying attention to some of those things that really might not have been on their radar screen or lists of things that you must do with the data in their normal workflow. And finally the third one that I was thinking about is related to in some ways a report that came out of OCLC research last week I believe, Ricky Irway (?) wrote it and the title was, let me see here, "Lasting Impacts: Sustainability of Disciplinary Repositories." And Ricky spends a little time in that report talking about the current repository landscape and the gaps that we have between some sort of institutional or disciplinary repository support for a scattered range of subject domains, but then other domains may have activity going on that's just not on the radar screen yet of libraries. And I think that data curation profiles work really could be expanded and used to probably finally move the conversation forward in talking about what would be the optimal, or as Ricky put it, the clean relationships between institutional repositories and disciplinary repositories as well as a government funded and other types of repositories that if you go back in the literature to about 2001 when the institutional repositories conversation really became national and international, the focus then was on institutional and really did not pay much attention to work that may have already been going on in subject repositories of various sorts for quite some time and then with the rush to implement institutional repositories and all of the lessons that were learned over the past decade in those efforts, there's still is not a very clear optimal relationship between the work flow of scholars who, let's say, were based in particular research environments like a university, and the, not mandates, but the encouragement to contribute to institutional repositories and sometimes the expectation that they will contribute to disciplinary repositories and cleaning up, that those relationships and looking for ways to get maximum bang for the buck if you can convince a scholar to donate or contribute data a repository—anyone of those types of repository to make sure that it feeds in multiple directions and the discovery paths go out and are helping meet more of the stakeholders needs on all ends of that spectrum. I think it could be a very useful area or field for activities. So there are many other areas that are related to this that I'm sure we might be interested in funding and the best way to decide if you have a potentially fundable idea or something that IMLS would be interested in sponsoring is to not wait until the application deadline for the grant programs, but instead to call up a program officer. So whether you're thinking about education activity so continuing education, training people with new types of data curation skills, or research or demonstration types of projects where you are trying out a new idea introducing that in to the day to day practices associated with data management and data curation or allowing libraries to take on new roles, new services, and to produce new products that are supporting data users and data creators, it's worth giving me or one of my fellow program officers a call to see if we can help you get the best possible fit for funding opportunities. And Scott I think that takes me up to most of my ten minutes that I had set aside here, so I will just stop there and let the program continue.

SB: Okay. Are you able to stay um, are you able to stay online?

CT: Yes, I want to continue to stay online from this point forward.

SB: Because we do have Rachel and Helen and maybe you can engage in some of the conversation with them.

CT: Yes, absolutely.

[5:01:30]

SB: Okay. So thank you for accommodating that. The questions that we were talking about included for this section on opportunities, I'm looking for where the profession is going, which we were just discussing. How have you seen or how do you see the data curation profiles helping in this area? And I thought Rachel that this idea that we *do* need as a community to be able to move forward, do you have any more to say on that?

RF: Well I think that's, like I said I think that we have to be really comfortable with the spaces in between I think something that Chuck said is pushing it outside the library, I think that old model of: and people will come to library, the build it and they will come, "field of dreams" aspect to working is just not gonna cut it in this environment. And going back to what Helen and I were saying, that the data curation toolkit and the tools that you guys are developing and kind of the community that you all are developing are really are that confidence builder and as the conversation starter, or the way to frame the conversation in sort of a very low barrier way and you're coming to help somebody, so I think that that piece, that's what I thought when I first saw the data curation toolkit idea, that to me was one of the most powerful things was giving the folks in the library, I don't know, the guide to move them forward but the same time for creating a conversation because it think it's only when we have that conversation element and we really have that knowledge exchange that you're really going to be able to develop the service that makes the most sense for your community. And I think that that's the one thing that, I don't want to say, I think a warning is maybe too strong, but when I was seeing that laundry list of things that people wanted from the toolkit, I was just sitting there going gosh well you asked somebody did they want and they'll give you a laundry list and you ask them what can you do and it's just what can you do? And it's just crickets, nothing! [laughter] And it's just you know, I think people also need to own this, I think that's the one thing, I mean it's, we're in this together but apart in one way, when we have conversations at the ARL E-Science Institute, it's like you can't really do this alone, this is definitely a networked thing that we have to do to carry out, but at the same time as you push things to the network to solve some of the infrastructure problems, I think in developing those services and those conversations it becomes very individualized, like something I was saying earlier, almost down to the project, and you have to invest that time, you have to invest that conversation in the south we call it "momma and them time", you don't ask about the business until you ask about someone's family, so it's just you know, you really have to invest that time, and you have to be really comfortable with that. So I don't know, I don't want people to see the toolkit as a crutch, and I don't want them to think that if they crib on them a little bit its wrong, but I think that maybe that in developing the community, we're talking about sharing the answers to the survey, but maybe sharing the hack's off the survey, I think would also be helpful, if you wanted to have people that have already gone through the experience or

looked at it, but it's not quite you know right for their liberal arts school, you know getting a couple people together to hack on that and then work on it and then release it back to the community that's using this tool, I think when you invest in it and you have more ownership and then it becomes this wonderful thing that helps it, once again carrying the conversation forward. I'm going to stop talking, but I just think for you guys, I would, you know resist the temptation to try to solve the questions for all community, but how can you set up the community to help solve the questions.

JC: Yeah, so absolutely, I agree with you 100%, Rachel. We designed this thing to be a generic so that it could potentially fit into any kind of situations, but being modular too, we have some core things we think really need to get discussed, but a set of these things are also optional, you can drop them in and out and make them your own or tweak them the way that you see fit. And we really encourage you to do that, to take the time and consider your own situation and your own context and to make this your own, and please, it's out there for you to use, it's not mine, it's not Purdue's, it's the community's and please see it that way and use it that way. So thank you for stating those things.

HT: Okay Chuck, before you came on, we were talking, Rachel and I were talking and a phrase that Rachel used was "leadership moment" in the profession, you probably used that one when you were at IMLS, [laughs] which I liked a lot in that we were talking about support from the top of the library and archives organizations, top down, looking at new roles and functions of librarians and archivists in making that part, part and parcel of the day-to-day work life rather than something that is one off and unique and you need grant funding for ultimately, to continue to do that all the time. I look at a lot of what's going on a bit like when automobiles were first invented and the very first cars if you driving in 1900 or 1910, you had to be a mechanic and you had to carry fan belts and all sorts of things because you would break down every ten miles. We are not mechanics anymore, in fact when we lift the hood, we can't even recognize the parts any more, right? But somehow in that process, we have developed a support system for a much more complicated object than the car of 1910 or even 1960, right because we can all look back at those cars and there was a lot of space under there, every little square inch was wasn't covered with something.

CT: And I can diagnose my problem with a '67 car.

HT: That's right.

RF: And you didn't have to plug it into the larger diagnostic network.

HT: That's right, we have really specialized tools and things. So it's a more complicated world today, but I think we need somehow to get from the artisan level of all of this, and I think we can do that as a community, we can't do that as an individual, but we know that these data curation profiles are time consuming and costly in that sense, but a lot of the other tools being produced that are around are in the same category, but if we continue to create the profiles and we continue to use these tools, a) the tools will get better, they will probably actually get more complex, but there will be a support structure built around them like we have highways and mechanics and diagnostic tools for our cars and things that we didn't have in 1900. So that when students are going through school, they can actually just go and see a library of data curation profiles and you know, come out really being an expert in social science

data and the way social scientists work, or the way chemists work, or physicists work, which we can't do now.

RF: Well I love the idea that was brought up earlier about how do you do a publication series of these data curation profiles or how can we share these a little bit more so then people say oh that's two parts me and one part not, and then I found something else and the research implications of being able to look at these at scale over time and you know, I think we could learn so much in going back to those librarians conversation facilitators, the more we know about the people we want to have a conversation with or the tone of the conversation, and I really think pulling those, the profiles together as a collection somehow in being able to do some analysis, we could learn so much.

HT: And that's where the confidence comes from.

RF: Absolutely. Absolutely. And I think having some sort of you know, aggregation of these things, but at the same time if you actually did something as intentional and mindful as a publication series, and people would invest—and when people were talking about what are the publication opportunities from doing the profiles, yeah they can be part of that series and then it becomes a bit more of a motivator for people to actually do them and share them if its our publication that goes toward tenure or promotion or whatever they're doing, but I think that and then once again, it benefits the larger community, so it's for that input that you do that's really going to benefit you locally, there is this larger community impact if you share this broadly through a publication series. So if you're not seeking funding, do that or you don't have an opportunity yet, I strongly, I mean just for me personally, but I think also as a community advocate I think that is something that would be huge.

CT: Yeah, I think that that's something that sounds like a fantastic idea to explore, the work of putting together something like a jigsaw puzzle without all of the pieces starting to fall into place one by one, by the way picture froze on this end, can you all see me there?

RF: We can still here you and we can still see you even.

CT: Alright, good. It sounds like a very worthwhile activity to me, that would also help us identify the real opportunities of where we go next, which larger domains or subdomains have not yet been addressed or investigated. I like the idea if you're able to somehow get the researchers in that field to time and again be reviewing those profiles and validating them repeatedly over time, to say practice is changing in this particular research area or to have some sort of mechanism for making sure that the information that you might have initially accumulated three years ago is still accurate and reflecting current practice would also be an interesting idea to explore. There's, Helen, that idea of making this part of just the way that libraries operate, is an interesting one as well. There have been a lot of conversations lately about how do we staff a data curation workforce, is it better to start with people who have the domain expertise and bring them in to work for the libraries to support, be a library employee supporting or filling that library supporting role for researchers or is it better to take librarians and push them out into subject domains and help them gain enough expertise to be effective with the group of researchers that they're serving. Some library directors these days are morphing or changing what normally would have been departmentally as liaison roles or subject specialist roles and turning them more into something

like a research support professional that may have a master's degree or another advanced degree in a subject and having them spending much more time over in the department. Already over the past ten or fifteen years you've seen quite a few libraries where the subject specialists have office hours over in a particular department or with research groups, but this is I think goes beyond what we've seen in a few libraries with people who are really over there providing day-to-day connection with the library services beyond just making sure that subscriptions to the right databases remain current or that the right monographs are being purchased or anything like that. This is really a hands on kind of interaction with the people who are creating the research data and the, let's use the term, homegrown resources that the library wants to ensure are ready for long term preservation if they're identified as worth it.

RF: Yeah, I think that's spot on, especially with the sciences, because it's definitely been a long-term trend that's been documented by ARL that our science faculty just view the libraries as their own personal buying club and not really an active agent of support or service in their research. So it's an opportunity to reengage open up another conversation that might have stopped several years ago.

SB: We wanted to open up the floor for questions, so if anybody has a question for Chuck or for Helen or for Rachel, can you hang on a little bit longer Chuck?

CT: Absolutely.

SA: This is Susie Allard, University of Tennessee, and let me grab my notes first, well in the report we got from Jake about the assessment, there was one comment where a person said, they didn't really understand why librarians were taking so long and they didn't really need librarians because they were moving ahead and libraries were taking too long to help them. And then you guys had a really great conversation, you know talking about how we are trusted to handle the canon of knowledge and the place to go. So how do we make the other side recognize the vision for those who are kind of just forging ahead on doing what they're doing and would benefit from what we do.

RF: You're going to get tired of me using the word conversation, [laughs] but I really think it's setting the expectations and reengaging with people who have seen—I actually had a provost say I'm not hiring librarians anymore to do this work with research, I'm hiring blah blah blah blah, and she came out with this title and then she just kind of laughed and said, "they really are just librarians, I'm just not telling my faculty that." I mean because her faculty had come to her and said that librarians had nothing to offer them in this new area of big data and networked research and interdisciplinary discovery because I think that they saw them as their buying club. They saw them as the repository of you know, ready catch, wait for the ball of the end product of the research and not someone that has that value added partner in the whole scholarly communication process, so it is a bit of an education. But I think it's also, I know I was jokingly saying, if you relegate data management or data curation or how you're going to describe your service that you're doing the breadth of service you're going to offer as a solid service that's tacked on the end or bolted on to your library services, that's not going to be, that's not going to open that conversation to bridge the gap. I think it has to be something to bridge that gap that transformative for the library and that we demonstrate. I think a lot of times we spend a lot of time talking about how we're relevant and we don't spend as much time *being* relevant, so I won't, I would

say yes, have conversations but also, demonstrate by doing and being that advocate and just jumping in and taking the big plunge to do the work.

HT: Right so again, that's that leadership moment from the top and I think that the people who are on the real front lines, even if its integrated, it will be a certain number of individuals at least at the beginning, really need to not just know about data, know about curation, know about metadata, and all those things, and they do need to know all of that stuff, but they need to be dynamic people who are sales people, who are interested and enthusiastic and excited about this that are going to be able to communicate not just with other librarians and archivists, but outside to the people who create the content to the people who use the content. Because the content creators have certain needs and the content users, who may be the content creators or they may be somebody else, have different needs. And when you actually, this sounds like a lecture, [audience laughter], look at the—I wonder why—when you look at the OAS Model those, that really just looks at the box, the repository for the most part, but there are at least arrows out to those other audiences, what comes in and what goes out. And it's a really hard job.

RF: You have to be an advocate.

HT: You have to be an advocate, you have to be knowledgeable, you have to be able to talk to all of those audiences. You have to be able to talk to the IT people in the library, or maybe, and even better, the IT people –

RF: The IT people on campus.

HT: The big IT people on campus, right, because they have more horsepower in their servers than what the libraries ever have. You need to be able to, um, go to conferences and talk about your stuff and get out there, nationally and internationally. It's a really big job.

RF: You have to be a broker. Go ahead Chuck, do you?

CT: Yeah so, there are many other leaders, I think there's a lot of overlap with lessons learned from the institutional repository experience of the last decade, plus there are many people who led the way much more than I ever did, but I think there are very few people who have the opportunity to make mistakes with as many institutional repositories as I did. [Audience laughter] I set up at eight different institutions, eight different institutional repositories, um, I really started out in the same place a lot of folks did, thinking, wow the logic underlying this is just perfect! I don't even have to explain it, they understand and all buy into this idea, so if I can just get the right department chairs or university administrators or somebody to think about it for a few minutes, they'll buy it. But that's not what works, what works, what we've learned that there really were only two ways to get institutional repositories to take off, one was either through mandates imposed from above by someone, or a much better way to do it and the way that seems to work better in a lot of US institutions at least, is tying it to faculty and researcher self-interest, finding ways to link it or make it a part of their self-promotion efforts that help them in their bid for academic advancement or advancement within their discipline. So if there are ways to tie the services and like Helen and Rachel were saying, you've got to be an excellent salesperson to do

this, but to be able to explain to them, here are the ways that if you let us work with you that we can help take information about what you're doing and your data and tie this to promotional efforts for you, I think that's where some of the most of the promising and entrepreneurial practices will emerge.

HT: Well and I think that word, entrepreneurial, that Chuck just used is very important in this. Libraries historically, and archives even more so have not been *entrepreneurial organizations*! Oh my god!

RF: Right!

[Audience laughter]

RF: Well I think that is a thing goes back to the whole idea of comfort and tolerance for risk, I mean when you think about tolerance for risk, this is an entrepreneurial space and you think about tech companies startups and these people, they didn't hire people that looked like them, they hired people that did not look like them. We're at a time, so it's not just risk in offering new services, but it's also risk investing in people that you might not have hired ten years ago, or five years ago, they might not, you know, they might not have the stamp or whatever, but you've got to have some, you've got to look for some other qualities besides their ticket was punched at certain schools or done this, because I think it's, it's a creative job, in addition to being a technology job. I mean this is a problem that has a lot of different facets and I think that goes back to something we were talking about earlier today. It's going to take a team of people and how many people reside thought the library organizational unit or are embedded in our departments of research across the campus, I think it depends on everybody's organization, but it's a broad spectrum and I keep on remembering something Helen said to me ages ago, we were sitting around at some reception somewhere talking about, you know, for some reason people wanted to like stake a claim on who owns this problem around data curation? Is it the library's problem? Is it the archives problem? Is it this person or that person? And Helen said it's a big enough problem that everyone can have a bite of this and I thought well yeah, that's true. And I think we need to remember that, it's only through shared effort and working with colleagues and professionals across the spectrum and that come together across academia that we'll solve this successfully.

HT: And I do think that the, I started off with the digital versus non-digital, but it's really, that's just one aspect of it, that it's the manifestation of the risk taking, or the risk aversive culture, that we can't be a risk aversive culture here. We have to come up and identify risk, manage risk, and what the benefits are, and not see it just as risk but see it as benefit as well.

RT: Opportunity.

HT: Opportunity.

SB: Are there any other questions? We're approaching the time we said we would a lot for this, [inaudible] in the audience...

JC: So you talked a lot about sort of the skills that are needed and the abilities that are needed for all of this and I whole heartedly agree with things like salesmanship and advocacy and entrepreneurship are

really important for this, how do you teach those skills? Both to new librarians who engage in LIS schools and to practicing librarians who are out in the field?

HT: Well I guess I'll be the one to talk on that. So I think part of that is by giving them an assignment like this that got people out of the door to talk to researchers and to replicate what they would do in the workplace. I also have another class where I have them write an ILMS National Leadership Grant and they have to do that as a group which they would probably do in the workplace and they have to do it with a real repository. So it gives people confidence if they can say that they can do that, I think those things we can teach. I think all of our schools need to be better at recruiting and looking for risk-taking dynamic people. We have fabulous students at Carolina; I wouldn't say they're all the most risk-taking individuals I have ever met. [Laughs]

RF: Having been a student, no, they weren't. But I think that's true, I think there's things that you can teach and creating, creating shared awareness around the opportunities space is what we can teach. As for, but once again, it goes back to the leadership situation and also being a good manager. I think one of the best things I learned as a manager of a technical services department is figuring how do you set up somebody, when you're training them to do something different, how do you set them up to succeed? And how do you look at them and say, you know, you've been cataloging opera videos for 20 years, but how can we get you over here to metadata? And being honest and when you think about this operationally over the whole library, I mean we've had some people in cataloging that really were excited in thinking about digital libraries when we just started scanning stuff. We had people in reference that were really excited. It's really kind of taking a couple steps back and looking at the people who are enthusiastic, that want to learn, and want to get out because those are the core things. You know you want to find those five introverts that ended up in your library somehow—I mean all joking aside—extraverts I mean—but I mean it's really setting people up to be successful. I mean not every reference and outreach librarian is going to be a good advocate for data curation services on their campuses, they're just not, and not everybody's the same so when it comes to setting these things up and who do you want to train and what do you want to invest in, I think there's some preliminaries that you can sort of test the water with the folks there and I think the idea about having the data curation, the data informal groups where people came together and asked about the questions, when people better understand the opportunity landscape, when they learn it a little bit more, I think that's when they'll show that they're comfortable taking the risk and changing what their job wants to be, but you know we have leadership, you know, up there at the highest level of the administration, but I think there's a really opportunity for our managers and our department heads to really start seeking out the talent that they have existing there and then making the investments and setting up the comfortable space for people to try something out so that they can be successful. I mean it's a mentoring, guiding, growing type of thing and it is an investment of time.

CT: So I heard some interesting ideas that I agree with what I heard from Rachel and from Helen both. Rachel you mentioned digital libraries a few years back and if you look at the literature about the skills that library directors were seeking for digital librarians, a lot of these very same skills in terms of entrepreneurship, leadership, creativity, and it reminded me of discussions we've had with others around 21st century skills, so what people need to be effective citizens in the 21st century. And these

skills like collaboration skills, and creativity, and communication someone commented at a meeting last year I believe that well those are the same skills that would have helped make you successful in the 17th century as well, and I think that's true, and it really just reinforces what you were both just saying that it really is a particular type of librarian or individual that's going to be most successful in stretching out beyond the traditional codified role of librarians and taking on new activities. And how do you teach that? Back to the original question, it's a mix of recruiting people that have some inherent, either potential or already realized capability in that area and then further cultivating them and letting them make the most of the opportunity.

SB: And that point I think is a good wrap up, I wanted to thank our presenters. [Applause] Thank you very much chuck.

CT: Oh my pleasure, thank you. Okay, see everyone later.

[5:30:40]