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Climate change: implications for professional best practices in special collections

This presentation responds to research presented by Eira Tansey, Ben Goldman, and Whitney Ray, available here <https://repositorydata.wordpress.com/2018/06/29/rbms-2018-presentation/>. Both presentations were part of the seminar "Climate Change and Cultural Heritage: Gathering Data and Exploring Professional Implications for a Very Different Future," presented on June 22 at RBMS 2018

[SLIDE: Clifton Gorge] Clifton Gorge was carved out by stretch of the Little Miami River that funnels through a narrow path in the bedrock. The gorge itself is about 40 feet deep, and the stretch of river is notable for rapids and small waterfalls. The white settlers of Ohio noted the power of the swiftly-moving water and built a gristmill there by around 1803. By 1812 a cotton and wool mill was providing cloth for American soldiers stationed in Ohio. At its largest, the mill spanned the gorge, four stories tall with an enormous wheel to take full advantage of the river's waterpower. Then a series of floods destroyed the mill--all that's visible of it today are the square holes in the rock where the mill was anchored to the gorge.

I'm starting with this as an example of my adopted landscape in western Ohio. Despite the fact that our profession pulls us to be somewhat itinerant, even the most subject-specific or internationally-recognized special collection is a part of the community. We as individuals are not just interchangeable cogs: we are parts of our places too.

This is also an example of places as palimpsests. There was a mill here, but now it's gone. Many of the changes we impose on the world are more permanent and irreversible than a mill made of wood and metal. The fossil fuels we used to come to this conference are much more impactful on the climate than a cotton mill. What I'm suggesting is that when we think about "long time" many of the things we consider permanent, whether it's our structures or the items in our collections, are (after all) just temporary. It's too late now to reverse climate change, though it's not too late to make some changes that might diminish its impact. On the other hand, climate might just intervene and render most of us and our institutions irrelevant, just traces on the landscape like the remains of this cotton mill.

Climate change inevitably now means climate refugees; damaged economies; disastrous impact on ecosystems; floods and fires. We can plan for it with some of the tool set we have become accustomed to using for emergency preparedness and preservation, but a certain amount of hysteria and existential dread might not be a bad idea. I am not an expert; I'm lucky to be up here on a panel with people who have developed some really solid data that the rest of us non-experts now need to digest and incorporate into our profession. On day one of this conference we heard about paradigm shifts: this is one of them. Some of my suggestions may be a bit provocative but, honestly, given the scope of the situation, they may not be provocative enough!

We need to think both about professional best practices over the next decades as well as about possible long-term futures for our vocation, keeping in mind that many decisions may be made for us by the climate and by forces more powerful than we are.

[SLIDE: some specific suggestions] I've agreed to present on some of the implications for our professional best practices. Some of what I share will be self-evident. Some of the specific suggestions that have already been posited in the literature (by my co-panelists here, among others) include: considering dangers of fire, storm surge, changing flood plains, and rising sea levels in our disaster plans; strengthening our relationships with emergency response professionals such as firefighters and other first responders; considering local shifting of collections, within buildings or between buildings, depending on the implications of climate change on our regions; strengthening regional partnerships and commitments for possible cooperation in response to crises; considering environmental risks when addressing landscape and building decisions and especially when designing new buildings; considering relocating some collections altogether; making decisions about collection development based on what we can responsibly agree to preserve. Much of this is already part of preservation best practice, but some of it can be reframed in the context of emerging data such as that we have seen today.

We also need to interrogate what "best" means when we think about best practice. "Best" for who? "Best" for what? I think we can acknowledge that our profession is to some extent tied up in institutions and practices that are degrading the environment. Increasingly we see sustainability initiatives on campuses and other institutions, and these are to be commended, but they are often rolled out in the context of institutions that are funded, say, by business or military contracts that may not contribute to a culture of sustainability.

Our own "best" practices and what is best for our collections, both physical and digital, can be a major eater of fossil fuels and other resources. Just as we have, in recent years, been interrogating the elitism and exclusivity built in to quote-unquote "special" collections, it is important to consider that what we preserve may be preserved at the expense of something else. It's not a zero-sum game: we don't have to choose between artifacts and the natural world. But we must acknowledge that our profession itself has a carbon footprint. "Best" practices within a professional context may have non-optimal implications beyond that context.

The final item on this list is "relationships." As in many situations, relationships are the most important thing. We need more relationships with our neighbors--formal or informal consortial arrangements--and we need to work on the relationships we already have in place.

[SLIDE: collection development]

Do we have a responsibility to "pass" on materials that we can't adequately steward? We already do turn collections and items away for reasons of money and space. What about items

that would be perfect for our collection but cannot appropriately be preserved in our region? I'm showing an example of museums doing just that in areas such as coastal Florida.

We can talk about this hypothetically. We can also incorporate specific text into our collection development policies--are any of us prepared to do that?

[SLIDE: collection development example]

Here's an example of some specific model text that could be adapted for local use in collection development policies. "Given the real danger of climate catastrophe in our region, known implications of which include __x__, __y__, and __z__, the library may need to decline items that would otherwise fit the specifications of this policy. When appropriate, we will attempt to identify a repository that can provide better long-term stewardship."

Language like this might send donors to other collections, but it might be more responsible for the collections long-term and holistically.

[SLIDE: digitization and publication]

We might also think of how items in our collections could be prioritized for preservation, digitization, display, and publication based on the stories they can tell about the changing air, land, and sea. This is an example of a map by an illustrator who primarily worked on plants and insects of the Ozarks, who I've been studying in collaboration with our colleague Jason W. Dean. Dumbarton Oaks prioritized his works for digitization because of our research. The availability of digital images, along with our initial publication, has led to an increased interest in Prince, in particular from people in the region of the country where he worked. We've received multiple emails--not just from scholars but from nature lovers who are fascinated by the history of their place--since we started writing about him. This map (from one of his manuscripts) shows an area of the Missouri Ozarks that has changed dramatically in the past century, as dams were created in rivers and the area surrounding his homestead was transformed into theme parks, motels, and parking lots. Images such as these can tell the stories of places as palimpsest. They can allow people who loved these places a century (or centuries) ago to speak alongside us for the preservation of specific landscapes and ecosystems.

[SLIDE: Data Refuge]

More immediately, but related to digitization and publication, we can look to our colleagues at Data Refuge, who have been saving and using governmental scientific data from before November 2016. As we all know from answering that perennial question from visitors, "what makes a book rare?" the answer is a complicated algorithm that takes into account age, scarcity, replaceability, and local practice. As soon as this governmental data became vulnerable it became a special collection.

[SLIDE: Environmental conditions]

I want to pivot from building and promoting collections to storage conditions for our collections, and ask: Do we need to interrogate and challenge what we have learned about temperature and humidity for special collections storage?

This one rings close to home for me since the collection I work with is situated in an ill-equipped 1970s building in a part of the country with great variation between winter and summer temperatures. Just last week we had water coming through the roof. I consider it part of my job to repeatedly and consistently advocate for improved environmental conditions for collections that are vulnerable to our building's fluctuations in temperature and humidity, and we have had some success in getting improved spaces and equipment for some portions of the collection.

It is so useful it is to be able to name specific numbers and ranges in our communications with facilities and other stakeholders. But many of us were also fascinated to learn from an RBMS keynote several years back about new work being done by the Image Permanence Institute to reevaluate best practices with regards to environmental settings. Much more of that research is now available to read, and I strongly encourage you to take a look if you haven't yet had a chance to. It will make your life much more difficult, but it is worth knowing about (<http://www.ipisustainability.org/>).

The top texts here are what we were taught in preservation classes in our library programs. The National Park Service recommends temperatures between 65°F and 70°F and relative humidity between 40%-55%. NEDCC suggests aiming for a stable temperature no higher than 70°F and a stable relative humidity between a minimum of 30% and a maximum of 50% but acknowledges disagreement and emphasizes the importance of stability. The overall gist is that the lower end of these ranges would be better. The leaflet continues to say that "The climate-control system should never be turned off, and settings should not be lowered at night, on weekends, or at other times when the library or archives is closed. Additional costs incurred by keeping the system in constant operation will be far less than the cost of future conservation treatment to repair damage caused by poor climate."

But the final quotation on the screen is from one of the publications coming out of the IPI/IMLS/NEH work on sustainable preservation practices such as shutting off HVAC for specific periods and building (when possible) with insulation and window types that mitigate fluctuation of temperature and humidity. There is also the suggestion that relative humidity can safely fluctuate up to 60% and that the standard of 70 degrees Fahrenheit may not be ideal for some collections. You can read it on the screen: "Maintaining tight RH control is often unnecessary – most materials can handle fluctuations between 30% and 60% • The old standard of 70°F and

50% RH with minimal fluctuation is expensive to maintain and usually not ideal”
(http://ipisustainability.org/wp-content/uploads/2010/06/IMLS_Energy_Saving_Project.pdf)

I present this data as a well-behaved adherent to best practices, myself. Challenging our accepted best practices can liberate us to focus on what is possible with regards to stability in our collections. Knowing that stability is really the most important thing, and given that the relative humidity and temperature are not egregiously awful, what are the most stable environments we can create for our collections?

For a moment, for the sake of this morning’s argument, let’s assume that it is too late for sustainability, anyway. What can we do when (not “if”) these environmental control systems break down altogether? What does “stability” look like in that scenario? How do we mitigate mold in the absence of HVAC? Maybe we prioritize getting materials into locations that are naturally as close to ideal conditions as possible. Maybe we identify regional or national locations that would be environmentally stable without significant expenditures of resources that may no longer be readily available. Maybe we prefer a distributed model and accept some long-term loss. Suffice it to say that climate change will have profound implications for our conversations about security and access.

[SLIDE: Disaster planning]

As Shannon indicated in her introduction, most of our current disaster/emergency plans are focused on a single event such as a fire or flood. They assume a return to normal at some point following the event. In some cases they include strategies for maintaining service while we recover from the emergency. But what if the recovery is not guaranteed?

Should plans include the possibility of long term relocation? (as populations shift and sea levels rise and fires burn communities) It has to be acknowledged that long-term relocation of collections would have a deleterious impact on the communities of patrons that need to access these materials.

At the very least, I think we should integrate text about regional disasters into our disaster plans, text to the effect of a good-faith commitment to assist with disasters in other regional collections.

Should our disaster plans also include serious consideration of speculative, paranoid, borderline hysterical strategies? Many plans already do include lists of priority items to save. Should they also include strategies, perhaps anathema to our minimalist and streamlined sensibilities, such as stockpiling supplies for a time when production and distribution systems break down, or keeping Jurassic technology on hand (card catalogs, typewriters, printing presses, mimeograph machines, and other reproductive technologies) for a time when the systems don’t come back up after an emergency?

I don't think it's a bad idea to imagine possible options for a very different future. We can't prepare for everything. But if we don't plan ahead the plans may be made for us by people with more power, and not on our terms. Documents have power.

[SLIDE: Document power]

There are other examples of document power that we could discuss. For example, let's talk about how we can build sustainability work and disaster recovery work into our job descriptions and into our libraries' mission statements. When we acknowledge the importance of this work to our mission, we endorse the work from an institutional perspective.

We are all familiar with the grinding need to do more with less. Sometimes this pressure comes from outside. Sometimes we place this pressure on ourselves. Too seldom do we talk about what we can stop doing in order to start doing something new. Discussion of sustainability work and disaster recovery work can be an eye-roll-inducing stressor in already overwhelmed workplaces.

The first thing we can do is to acknowledge that it *is* real work, not an extracurricular hobby, and then we can make it part of our institutional workflows. Including this work in our documents, whether it is our disaster plans, our collection development policies, our job descriptions, or our strategic plans, legitimizes the work and gives institutional imprimatur to the reality of the data.

[SLIDE: Professional networks]

In other words, why are we even here? Most people on earth never fly on an airplane. Almost everyone at this conference is an outlier in that regard. We all know that there is environmental impact associated with our professional activities.

Some of this is acceptable; living creatures have impact on their surroundings! But some of it may be excessive.

I love RBMS. But what if we considered an in-person conference every other year and a virtual conference in those alternate years? What if (where relevant) annual review and/or promotion & tenure documents actually valued regional presentations over national presentations? I don't want to see sustainability used as a reason to cut professional development budgets! But we need to admit that many best practices are informed by perceptions of status, a perception that "I must be an important expert if I am able to fly all over the country." Or, "my library is important because it can afford a state-of-the art special collections facility."

So that's a short-term consideration: Keep the incredible value of our conferences but move to an alternate-year model.

Moving beyond that, let's assume again that it is too late for sustainability. What can we do if professional networks break down? Fortunately many of us are familiar with historical methods of scholarly communication.

In the early eighteenth century, a missionary in China sent an article to Paris about the remarkable powers of a plant called ginseng. He noted that ginseng flourished in thick mountain forests, on riverbanks, among the roots of trees. He then speculated, "If it is to be found in any other country in the world, it may be particularly in Canada, where the forests and mountains, according to the relation of those that have lived there, very much resemble these here." Five years later, another missionary, this one in eastern Canada, read this account and started looking. It took him several months but he did indeed find ginseng--one of the rarest and most finicky plants, which naturally grows in only several parts of the world, China and eastern Canada among them. Once that missionary, whose name was Joseph-François Lafitau, consulted the Iroquois among whom he'd been proselytizing, they informed him that they already used it in their medicine: *they could have spared him months of fieldwork*. (Shigehisa Kuriyama, "The Geography of Ginseng and the Strange Alchemy of Needs")

Knowledge has survived and circulated in so many ways. Sending a report from China to France, the fact that the letter survived the journey to be printed and distributed, that it made it into print and across an ocean to Canada, etc--these are much more laborious scholarly models than we are accustomed to. So is memorized oral history. But there are models we can look to if (or when) we are unable to hop on a plane or send a quick email.

We don't have to look at reports of missionaries or scientific societies. We could just as easily look at 'zines traded hand-to-hand, self-published works on women's health that created spaces and communities across space and time. There are many such examples.

[SLIDE: conference swag in a trash can]

I welcome your thoughts on ways we could make RBMS itself more sustainable. Acknowledging that professional travel itself has a major carbon footprint, let's talk about the steps--large and small--we can take. Maybe we don't need quite so much conference swag, for example.

[SLIDE: Catastrophe school]

At my library we have recently been consulting with a community in Kibeho, Rwanda on the preservation of a collection there that dates back to the 1980s. In the Rwandan genocide of the 1990s, several of the creators of the archive were killed and others were forced into hiding or left the country for safety. The materials of the collection that have survived did so because they were distributed and hidden. Now, some of the materials are back where they originated but some are in Europe and North America. Not everything did survive, but enough made it through the bottleneck that the community can still tell a powerful story about the original incidents documented by the collection as well as the story of their survival.

As cultural heritage professionals we are familiar with similar stories around the rise of ISIS in recent years, in particular the story documented in *The Badass Librarians of Timbuktu*, where manuscripts were hidden and smuggled away from particularly vulnerable situations in Mali. Similar strategies were used in Bosnia and Kosovo in the 1990s.

The library created by Aby Warburg is only in London today because Fritz Saxl oversaw its covert transfer from Germany in 1933. It barely escaped the bonfires of the Nazi Propaganda Ministry and the aerial bombing of Hamburg during World War II.

Is there a model here for plans we make, either as a profession or, perhaps more quietly, internal to our institutions, about how to respond to a catastrophic break from the normal? When do we know if a catastrophe is catastrophic enough to suspend the everyday rules?

[SLIDE: Memory keeping]

In conclusion, I want to talk briefly about some of the ways information survives. I'll give one example from fantasy and one example from reality.

In N. K. Jemisin's *Broken Earth* series there is an ancient wisdom known as stonelore, which is presented at first as an infallible set of survival techniques. It is ancient. It is learned by all children at school as part of a toolkit for long-term survival. But as the trilogy unfolds we realize that even this ancient knowledge has been edited and overwritten and censored for political gain over millennia. "There's a reason Tablet Two is so damaged: someone, somewhere back in time, decided that it wasn't important or was wrong, and didn't bother to take care of it. Or maybe they even deliberately tried to obliterate it, which is why so many of the early copies are damaged in exactly the same way."

That's the fantasy example.

[SLIDE: Huarochirí manuscript]

The second example, from reality, is the Huarochirí manuscript. This manuscript is based on stories related by the native Indians of the mountains of Peru, people who were aware of the Incan Empire but not entirely part of it. Written in Quechua (transliterated in Roman script) in the late 16th century under the supervision of the Catholic Church, it is one of multiple examples of Pre-Columbian cultures being documented at the very time they were being forcibly oppressed, ushered into being by the very people who were oppressing them. (*The Huarochirí Manuscript: A Testament of Ancient and Colonial Andean Religion*. Translation from the Quechua by Frank Salomon and George L. Urioste, 1991)

The text is a complicated mix of ancient myth, recent history of the previous seventy years of colonial presence, and overlaid Christian interpretation. But as you can see from the slide on the

screen, there is a certain reticence even to the European explanation of the ancient mythology. A story is told. An interpretation is substituted. “*Maybe that’s what it was.*” The story tells itself and untells itself simultaneously, but still it is told. The text was meant to undermine the so-called idolatry of the region but the product is in fact a storehouse of lore that could otherwise have been lost. The manuscript is now in the Royal Library of Madrid.

The first example I gave, from fantasy, shows the ephemerality of the things we perceive as permanent. In the context of geological time, very few of our holdings will last, anyway. Things we accept as certain may not be certain. But this second example, from reality, attests to the insistent power of information. Information sneaks its way into new contexts in ways we might not expect. But it’s not a passive process. It’s a people process. We build mills and we build libraries. We fly in airplanes and we buy products. We work too much. We know our spaces aren’t neutral and we know everything’s political, but we also have a hundred deadlines and obligations to people inside and outside of our institutions. We write documents and design workflows that reflect our priorities as individuals and as a profession.

Every day we make decisions about exactly what’s urgent and what we ignore.