Note

The entries in the following pages are responses to questions posed during Units 1-9 of LIBR 259 – Preservation Management taken during the Fall 2010 semester. In these responses, I apply the knowledge I have gained from each units’ readings to demonstrate how I understood topics in question. Preservation management is a broad field, and the topics discussed range from the history of preservation, theories of preservation for both books and digital materials, the responses by professionals in the library, archive and preservation community to the needs of preservation of various materials, as well as controversies and issues surrounding these theories. All responses were posted on discussion boards in the LIBR 259 section of the ANGEL Learning System, which is the primary interface with the teacher and my fellow students. A requirement for these discussions included responding to our fellow students’ postings. For the sake of brevity I have excluded my responses to other students, except for one post that I felt was relevant in clarifying my own post both for myself and – I hoped – for others. As preservation is a very emotional topic, some fair amount of emotion is reflected in these posts.
Unit 2 – Preservation and Conservation – Past and Future – 9/1/2010

Directions:

There are two major transitions marked in our readings this week. First, there is the transition in the definition of "Preservation," first about preserving the intellectual content...then it became about preserving the original object...then it shifted back toward intellectual content again. Second, there is the transition from restoration (tampering with the original in order to preserve it) to conservation (trying not to tamper more than necessary while conserving it).

1. What are the relationships between these patterns?
2. What historical circumstances helped to bring about these transitions, and are they related?
3. Which schools of thought do you believe are best for the field?

Response:

Cloonan (2010) mentions a couple of things that resonated with me. First of all, was the quote from Vasari about restoration, “To tell the truth, it would sometimes be better to leave the works done by excellent men half ruined than to have them retouched by those who are less knowledgeable.” I think as preservationists, we walk a fine line between conserving a book (or other entity) and restoring it, and that sometimes the act of restoration takes away some of the feeling of age and authenticity that makes the work in question unique and valuable. I remember the first time I visited Ellis Island after it reopened to the public (this was early 1991), and feeling that something was missing, as it had been restored to such an extent (grime removed, tiles repaired, repainted) that I was not able to feel the history that the place represented. The most moving part of the island was a collection of artifacts that been recovered and not restored. They were still dusty, rusted and had peeling paint, and therefore had much more meaning. Therefore, it is interesting to find out that this has been a long-standing concern.

Also, the very thing that has made books so widely available – the availability of paper that can be produced in large quantities in quite cheaply, is also something that contributes to the problems that we are facing today, namely paper that is in danger of deteriorating. I was quite happy to find out that Congress passed the Commission on Preservation and Access, the Permanent Paper Resolution (P.L. 101-423) in 1990, which will hopefully lead to the development of more durable paper on which to preserve our cultural records.

Most importantly, Cloonan describes the difference between preservation, which refers to all activities that seek to preserve or conserve materials, and conservation, which is a particular set of actions to preserve books and materials using scientific practices and techniques that have been developed over centuries. It is the 20th Century research of William James Barrow that has contributed enormously to the understanding of the chemical properties of paper as well as understanding on how to conserve paper (and more importantly how not to conserve it), as well as creating more durable paper.
A key principle of conservation – at least as I understand from this article – is that it’s primary objective is to preserve the cultural properties of a work that lend it value. In other words, if treating a manuscript, book or other such entity will destroy or harm its cultural value, the best thing to do is to do nothing at all. By that definition, the artifacts at Ellis Island that were not treated in any way, and were left as they were found, could be said to have been conserved.

Cloonan also brings up the subject of digital preservation, and notes that it is preservation only in a loose sense of the word, in that while it makes content widely available, it does not actually preserve the original materials that are being presented in digital format. There is also the issue of materials that are “born digital” and for which preservation and conservation of digital formats that are currently obsolete – or that soon may become so – is a new concern.

References


Unit 3 – Things that surprised me – 9/8/210

*Directions:*

*This week, you read about the threats libraries face...environmental and human.*

1. What threats surprised you the most?
2. What threats scared you the most?

*Response:*

One thing that struck me is that I was raised with the idea that food and drinks in libraries are absolutely forbidden. However, in recent years I’ve noticed an effort on the part of libraries themselves to make accommodations for users who want to bring drinks in with them provided they are in "spill-proof" containers. At the library where I am doing my internship, reference librarians often have coffee in travel mugs and bottles of water with them at the reference desk. Granted, I have followed their example (bad preservationist!) and have had a bottle of water with me up at the desk myself. Also, I’ve noticed that the libraries where this takes place tend to be academic. However, I looked at the San Francisco Public Library’s website just for the sake of comparison. Their Guidelines for Library use state that "To Ensure Access to Library Services for All Users the Following are Prohibited: Eating or drinking, except in designated areas. Water bottles, covered beverage containers, and foodstuff must be kept out of sight."

This strikes me as unclear. If someone eats or drinks outside of the designated area, are they still allowed to do so if they keep their food and beverage out of sight? How much damage are libraries doing to their collections by trying to accommodate their
users desire for refreshment while they use the library?

References


Unit 4 – Libraries and the preservation of information – 9/15/2010

Directions:

Needless to say, libraries and microfilm have both a close and uncomfortable relationship. In your response posting this week, please do the following, in this order.

1. First, mark ONE thing that libraries were trying to accomplish with their microfilming practices that you find compelling/admirable/necessary.
2. Second, mark ONE thing that Baker (and you) finds troubling about these microfilming practices.
3. Third, mark ONE thing that the library community has responded (turn to Google scholar and search for double fold, and you'll find plenty of responses!) that helps you to question something about Baker's narrative.
4. Fourth, in ONE paragraph, describe what you think libraries should do now in the wake of Baker's expose.

Response:

1. Through microfilming, libraries were definitely trying to preserve access to the information contained within the newspapers in their collection. They were doing what they could to make sure that the informational aspect of the cultural record was being preserved, and that even if the original format (e.g. newsprint) crumbled to dust, that at least the ideas contained therein would not be lost forever. By preserving the information (even if not in the original format), they were attempting to extend the life of the information by allowing more people to have continued access to it for far longer than the life of the original newspaper.
2. The place where I agree with Baker is the fact that digitizing microfilm results in a third generation copy, which loses a lot in terms of resolution and clarity, and therefore informational content. He uses the example of 19th Century newspapers that
were printed with very small type, the microfilmed version of which is difficult to digitize at a resolution that would preserve the information. If libraries discard the original newspaper or other document from which they took the microfilm, the information contained in that original will be lost forever.

3. Pavelka (2002) responds that Baker’s focus is too narrow. He only looks at one type of printed material (newspaper) and at early microfilming practices that took place before microfilming was improved. In addition, he makes statements that are rather simplistic, such as the idea that paper from 500 years ago still survives intact and is easy to read without taking into account the material that the paper was made from (e.g. cotton rags as opposed to wood pulp), or factors such as the length of the fibers (older paper had longer fibers and was therefore more durable than paper made from wood pulp, which had shorter fibers). Furthermore, Pavelka responds by saying that by limiting his focus to preservation of old newspapers, Baker ignores the fact that librarians deal with information in a variety of formats, and must provide ways to maintain access to this information, otherwise it is rendered useless. Such considerations often have to be taken into account under limited budgetary conditions.

4. In light of Baker’s expose, and especially based on the public and media reactions, I think there are two things for libraries to do. Firstly, libraries need to educate the public as to their role in preserving the cultural record and providing as much access to it as possible and to as many people as possible. However, libraries do not have the physical or financial resources to save every copy of every item. In providing access, choices must be made as to what to keep and in what formats. The destruction of materials is obviously a very emotional issue for Baker and many others, including myself, and I think that libraries need to speak to the public’s concern on this subject. Secondly, libraries must periodically re-examine their own methodologies for microfilming materials and to always remain open to improved microfilming technologies. I emphasize microfilming over other technologies as I have become convinced through reading Edmondson (2004) and others that microfilm will still be readable years into the future even when digital formats are no longer readable. As part of the process of microfilming brittle (or seemingly brittle) materials, they should also periodically re-examine their criteria for determining what can actually be kept, as it may prove that some materials may not be as brittle as previously thought, and may still be usable. It may also be possible to donate old newspapers and other printed materials to archives, museums or other institutions that may be able to preserve them in the long run. Of course, this would take a concerted effort to work out such a system.

References


Unit 5 – Proprietary software issues – 9/24/2010

Directions:

I want each of you to submit one post where you talk about

1. How/when you first realized that digital preservation was a problem (and that it wasn't about digitizing analog collections) and
2. Something that surprised you in this week's readings.

Response:

I have two examples of experiences with preserving information digitally due to out of date and proprietary software. When I was in college, back in the early 90s, I convinced my parents to get me this machine from Panasonic which was sort of like a typewriter with a little CRT screen so you could see what you were writing, edit it, and print out the completed copy. You could also save the work on a 3.5 inch floppy, which I thought was pretty cool and cutting edge back in 1992. However, the only machine that could read the info on the floppy was the machine on which I wrote it. We eventually got rid of the typewriter thing (I don't know what else to call it), rendering the disks themselves unreadable. Seeing as this was one machine made by one company and not a standardized system (as far as I know), I don't think there would be any way to resurrect the information on there.

Another incident had to do with bad timing and obsolescence. In 2001 I got a minidisc player, as I was wary of mp3 players (this was just before the iPod came out). A problem I had was that soon after I got it, it stopped working, and by then it had become obsolete, meaning I had a machine that I couldn't use. I guess a couple of things surprised me. I think Thibodeau's (2002) was an eye opener in terms of outlining the steps that not only could be taken but that actually are being taken in regards to streamlining digital preservation. My knowledge of emulation is rather basic in that I know more or less what it is, but not how it works, so it was good to get some (fairly understandable) technical information. Also, I had not heard about the InterPARES project, so it is good to know that someone is working to address the problems that comes with having multiple digital formats and with corruption of formats over time (remember all those exhortations to never leave a floppy disk lying around anywhere near a magnet)? I think the idea of the Rosetta stone approach is interesting, and to from what I gathered it sounds like a form of encoded metadata.

This brought up a question which is how do we know that the metadata we generate today will be readable in the future? How do we create metadata that lasts over the various iterations and versions of software that are sure to be created over time? Wouldn't not having readable instructions on how to use a format render that format unusable? I guess this may be why it's necessary to agree on a standardized format now when we are aware of the problem.
It's also interesting to find out that when it comes to choosing a format to record information, we are often go with the technology that seems exciting and cutting edge, and which then becomes obsolete rather quickly. I wonder if this was the case with the creators of the BBC Domesday Project (Abbott, 2003)? It may be the case that digital technology was so relatively new at the time that it was hard to foresee what would be coming down the road in terms of new technology. Hopefully we have a bit more foresight today so that we can plan for obsolescence.

References


Unit 6 - Digital Preservation - A Work in Progress – 9/29/2010

Directions:

This week, I want you all to reflect back to the conservation/restoration realm that we confronted in week 2’s readings on preservation history. Write one post in which you describe some of the similarities and differences in this week’s discussion of different methods of digital preservation, especially emulation and migration.

Response:

I think the title “Thirteen Ways of Looking at...Digital Preservation” (Lavoie & Dempsey, 2004) sums up the situation nicely. We are still in an era when questions are being asked, and things are not being done yet on a systematic, widespread scale. As we are at the beginning of our quest to come up with good strategies for digital preservation, everyone has ideas.

For example, InterPARES 2 (2008) did a survey of not only how records were preserved, but why. In many cases, records were preserved using makeshift systems, and were preserved to provide back-up copies in case something happened to the original. In other words, preservation was not the point.
The National Library of Australia (NLA, 2003) had a very good section in which they discussed the pros and cons of various methodologies. The ones that stood out for me, in addition to emulation and migration, were the idea of the Universal Virtual Computer (UVC), and the development of standards.

Standards, to my mind, seems to be the best way to go, as it is more efficient to have everyone working from the same rulebook. I hope that at least a preliminary set of standards will develop from InterPARES’s research as well as others. One thing I am gathering though, is that it may be very difficult to develop one set of standards that works for all situations. Emulation and metadata may work in some situations, whereas migration might be more appropriate for others. The standards themselves will have to be constantly reviewed over time as technology changes.

From what I gather from the readings, emulation has many components. Encapsulation seems to be a way of packaging a piece of digital information with metadata describing how to use the information package in question. However, as NLA points out, encapsulation doesn’t work if you can’t recreate the data due to a change in technology (how do we know that all digital files will still be created using binary code in the future?). UVC has the disadvantage of not being in place yet, though when – or if – it is implemented, it would go far in making emulation an efficient process for preservation.

Regarding metadata, how do we describe digital artifacts that have multiple components? A web page can have video, audio, pictures, widgets and RSS feeds. All of these components change fairly constantly. Also, do we ascribe metadata to all the components, or just that which is considered to be the “primary” content? If ads on a website change throughout the course of a day, do we ascribe metadata to them and preserve them as well? Is it that important that we preserve ads such as the following?

![Marketplace Ad](http://www.yahoo.com)

Emulation has an advantage over migration in that there is a greater likelihood that we would be able to save information such as the above image that might be lost through migration. Emulation also seems as if it would preserve the experiential element of a digital artifact, which to me is just as important as saving the intellectual content. One of the reasons people like old newspapers and magazines is that it is things like advertising that gives current viewers a feel for the era in which the magazine was created.

References


Unit 7 - Preserving the bitstream is just the beginning – 10/14/2010

Directions:

I'm taking this week's discussion question straight from one of the authors of OAIS, David Giaretta:

1. Given a stream of bits, what is needed to produce usable information?
2. How will this change over time?

I want each of you to use this question to help you engage with the components of the model. I also want you to turn to each other as you grapple with this question (it's not an easy question!).

Response:

To me, it seems that the overriding guiding principle of the OAIS model is “that the bit streams comprising the preserved information remain complete and renderable over the long-term,” (Lavoie, 2004, pp. 8), and that all the procedures and processes to make that happen extend from there.
Two of the major functions of an OAIS (according to my understanding) are:

1. Ensure that information remains accessible to the designated community (the group who is likely to use it most).
2. Preserved information must be “independently understandable” by anyone who needs to access it, meaning that the user can make use of the information on his or her own without the user needing assistance directly from the producer of the information in order to do so. This is especially important as formats for digital files are constantly changing.

Variables that need to be anticipated in ensuring that the above functions are carried out are:

1. Preservation of information also requires that the AIP be migrated among formats as needed, based on technological changes in storage media and formats that take place fairly regularly and frequently over time due to the obsolescence of storage formats.
   a. Information must be systematically checked for errors to ensure that information data is not corrupted due to the migration process.
2. Metadata that describes the information package is geared toward the designated community. However, a designated community may change over time, meaning that the metadata will need to be adjusted over time to ensure that the information remains understandable.
   a. An OAIS must be able to refine the metadata that is received from the information producer (the SIP) as well as adjust it as needed (Fedora and the Preservation of University Records Project, 2006), to make sure that it remains relevant to the users’ needs.
3. Disasters must be anticipated and a disaster recovery system put in place beforehand, as well as a back-up system, so that information that is lost or corrupted can be recovered.

References


I'm glad you found my post helpful. I've also been thinking about this in terms of an analogy, where the mission is to protect an egg from the time it is hatched to the time the consumer eats it (or dyes it, or throws it at something or someone):

1. Information packet = the egg
2. Information producer = the farm
3. Software/hardware that creates the information = the chicken
4. Container = the egg carton
5. SIP = the egg, plus the paperwork from the farm that indicates what farm it came from, and the contents of the shipment containing the egg in question.
6. AIP = the process of unpackaging the cartons of eggs as they are received from the farm and preparing them for display on the shelves where the consumer can access them.
7. DIP = the egg as it is packaged for consumer consumption
8. Metadata that the consumer needs = the labeling on the egg carton plus the price and the freshness stamp
9. Archive = the store that sells the egg to the consumer

The key thing is to keep the egg from breaking while simultaneously tracking its source, as well as passing the necessary information on to the consumer. The average consumer does not need access to the farm's records or information about the individual chicken that laid it. Hopefully, they will also know how to use the egg once they get it.

Let me know if this is a good analogy.

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**Unit 8 - The Premise of PREMIS – 10/21/2010**

**Directions:**

As you all learned last week, OAIS mandates that content be renderable and understandable by the Consumer as a DIP with no further information from the Producer or the Archive/Management.

1. **How does PREMIS help this happen?**
2. **What did you find most interesting or challenging about PREMIS, either in theory or in how it would be applied?**

**Response:**

From what I gather, PREMIS is a means to describe information about a digital object in as much detail as possible, and an attempt to capture as much information as possible
about the digital objects being ingested. This is done through the use of the Data Dictionary originally created by the PREMIS Working Group. The Data Dictionary (DD) works to identify every aspect of an object that may need to be identified. The entries in the dictionary are called semantic units, with several units sometimes comprising a semantic component. An example of a semantic component is objectIdentifier, which, as the name indicates, identifies the object that is being stored in the archive. The dictionary gives examples of how such an entry might look, and indicates whether or not it is mandatory to include such an entry, or whether you can have more than one such entry (whether it is repeatable or non-repeatable). Including every possible piece of information about an object that is considered relevant (hopefully) eliminates the need for a consumer to contact the producer or the archive for more information about the object, as everything the consumer needs to know would presumably be included in the metadata container.

PREMIS, like OAIS, aims for consistency above all. The quote that sums it all up for me in this week’s reading is "PREMIS does not specify how metadata should be represented in any system, it only defines what the system needs to know and should be able to export to other systems" (Caplan, 2009, pp. 7). This is echoed by RLG (2005), in that even though it does not mention PREMIS by name, it does underscore the need for consistency when ascribing metadata to objects, which is what PREMIS also aims to do.

The part I found challenging was how PREMIS could be used in conjunction with XML, which I attribute to the fact that I barely understand XML, though I think it may have something to do with populating databases, though I could be wrong. I found an interesting report (PREMIS Working Group, 2005) that showed examples of how an object would be encoded using PREMIS, which made it easier for me to understand. I also found it interesting that for all its complexity, PREMIS was actually designed to be somewhat limited in scope, only defining the metadata needed for preservation purposes. For instance, metadata about cataloging, business rules for particular repositories, and description of hardware is excluded, as is metadata about specific software types. I think this goes at least part of the way of reducing possible headaches (or the severity thereof) for archivists.

References


Unit 9 – Too Much Stuff To Keep Track Of It All. – 10/28/2010

Directions:
This week, I want you to ponder what you’ve learned thus far in your personal archiving assignment.

1. What of your digital possessions matter enough for you to preserve them?
2. Do you think you’ll continue to preserve them after the assignment is due?
3. Will you be more religious about your back up strategies, if not full preservation strategies?

And if your answers are no...

1. What are the implications?
2. And do you think this might be part of what is currently holding libraries back from preserving content as well?

Response:

This is a tough question. The first thought that comes to mind is that my photos and music are my prized possessions as they have personal meaning to me. In the case of the music, I also want to preserve it as if it got lost or corrupted, it would cost quite a bit of money to replace it. However, preserving digital photos presents a bit of a conundrum. On the one hand, knowing that digital files are more fragile, I want to make sure that they stay preserved. On the other hand, creating digital photos (to use one example) is so easy that I probably take far more pictures now than I did when I had a film camera, due to the amount of storage space available on the digital cameras vs. film (these days, the idea of being limited to only 24 shots is quite unthinkable). Being able to take many more pictures than before means I wind up with more crappy, meaningless photos than ever before, as I do not have to worry about apportioning out the frames of film allotted to me.

Here’s the kicker: I never throw the crappy photos out, because what if I need or want it some day? I want to keep every photo of my cats that I take, even if I have 10 of what amounts to the exact same shot. I wonder if this is one of the ideas behind the MyLifeBits project (Bell & Gemmell, 2007; Lucky, 2005; Wilkinson, 2007)?

Other digital materials that matter to me are the files and web pages I have accumulated while in the SLIS program. Part of this is due to the fact that it is extremely valuable information that could be of use in the future, while the other part is the fear that I may not have access to it again once I’m done with school (I’m thinking in particular about access to all the databases and resources I have access to as an SJSU student).

Of all the files I am preserving for my personal archiving project, I think there are perhaps three that I would not keep as they either have no personal or emotional value and/or they are out of date and therefore have no more relevance. As it stands, I semi-regularly back-up all my files to an external hard-drive, and have started using Dropbox
for some of my files (this is beyond the criteria set for the personal archiving assignment).

As far as being more religious is concerned, given the sheer amount of information I have on my computer I don’t know how practical it is for me to do more than what I am doing, other than perhaps pay for more storage space online for all my files, whether it’s through Dropbox or some other system. As an individual, I obviously don’t have the time or the patience to archive every single piece of data I own according to PREMIS or OAIS standards, but although I like the idea of creating a union catalog of all my digital files (Marshall, 2008b), this would take a lot of time to create one from scratch. This may be a good opportunity for someone to create an online database system in which one could record the locations of all their digital items, with some sort of mnemonic system or other memory aid to help people recall what they are looking for, so they can then search for where it is located.

The major implication of living in the digital world is that I may have to get more comfortable with the idea of accidental (as opposed to deliberate) loss (Marshall, 2008a), seeing as I may not be able to keep track of everything. Libraries, obviously cannot afford to lose anything, but are also saddled with the same constraints of time, funding and staffing as are individuals, though with a far greater amount of material with which to work, and a far greater amount of metadata – and therefore record-keeping requirements – to keep track of. The combination of metadata and the amount of material can lead to backlogs, which is the case with many archives.

References


