From Analog to Digital: Changes in Preservation

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Preservation

“... protecting materials by minimizing chemical and physical deterioration and damage to minimize the loss of information and to extend the life of cultural property.” (A Glossary of Archival and Records Terminology, p. 304, 2005)
Preservation

“... implementation of policies and procedures for appropriate environmental conditions; handling and maintenance during storage, exhibition, packing, transport, and use; integration pest management; emergency preparedness and response; and reformatting and duplication.” (ibid., p. 309)
Evolution of the Preservation of Cultural Artifacts

- Binding documents into books
  - Moving from scrolls to books with hard covers
- Copying documents to make more than one copy (e.g. in monasteries)
- Storing materials in dry locations and away from pests and other disasters
- Securing volumes to certain locations (e.g. Bodleian Library)
Evolution of the Preservation of Cultural Artifacts

- Storage of collections in “fireproof” facilities
- Hand binding
- “Silking” (ca. 1900-1930)
- Library binding
  - Over-sewing, side-sewing, smythe-sewing, perfect binding, double-fanned adhesive binding
Evolution of the Preservation of Cultural Artifacts

- Microfilming
- Lamination (ca. 1930-1950)
- Environmental standards
- Development of acid-free/permanent paper (post-1960)
- Preservation photocopying
- Polyester encapsulation
Evolution of the Preservation of Cultural Artifacts

- Deacidification
  - Individual and mass

- Traditional concerns re chemical, mechanical, and biological threats

- Disaster preparedness
Information Density vs. Life Expectancy

The Irony of Modern Media

- Clay Tablet
- Papyrus
- Illuminated
- Gutenberg
- The Whale
- Newspaper
- Microfilm
- Microfiche
- Tape
- Disk
- Optical

Years of Use
Characters per Square Inch
Digitization: Access or Preservation?

Access

- Clearer image than microfilm and easier to read
- Potentially available to multiple users at one time
- Provides excellent surrogates of originals
  - Exhibitions, research, publicity, etc.
  - Easily retrieved and manipulable, transmittable, and transportable from a repository to the sites of research, presentation, and teaching.
  - Researchers’ expectations on availability of materials in digital format increasing
Digitization: Access or Preservation?

- Preservation
  - Lessens use of originals?
  - Long-term commitment to maintain files
    - Technology, funding, equipment, personnel needs to maintain accessibility to files
  - Serious concerns re fragile materials as demands increase to have them in digital format
    - Need to consider preservation/conservation requirements of originals prior to digitization
Digital Challenges

- **Storage media**
  - The newer the media, the less stable it is and the shorter its lifespan
    - They are short lived relative to traditional format materials
    - Can deteriorate rapidly, making the time frame for decisions and actions to prevent loss is a matter of years, not decades.

- **Hardware and software obsolescence**
  - Inability to read older files using obsolete software, media, and hardware
Digital Preservation

Digital preservation: “the planning, resource allocation, and application of preservation methods and technologies necessary to ensure that digital information of continuing value remains accessible and usable.” (Margaret Hedstrom)
“Digital preservation combines policies, strategies, and actions to ensure the accurate rendering of authenticated content over time, regardless of the challenges of media failure and technological change. Digital preservation applies to both born digital and reformatted content.” (ALA)
Digital Preservation

“Digital preservation policies document an organization’s commitment to preserve digital content for future use; specify file formats to be preserved and the level of preservation to be provided; and ensure compliance with standards and best practices for responsible stewardship of digital information.” (ALA)
Conclusions

- Preservation approaches and concerns have changed over time based on the media and information to be preserved.
  - Artifact and information or information alone?

- Digital preservation poses serious challenges to the cultural world for a variety of reasons not the least of which is its fragility.