

# From Analog to Digital: Changes in Preservation

Gregor Trinkaus-Randall  
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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

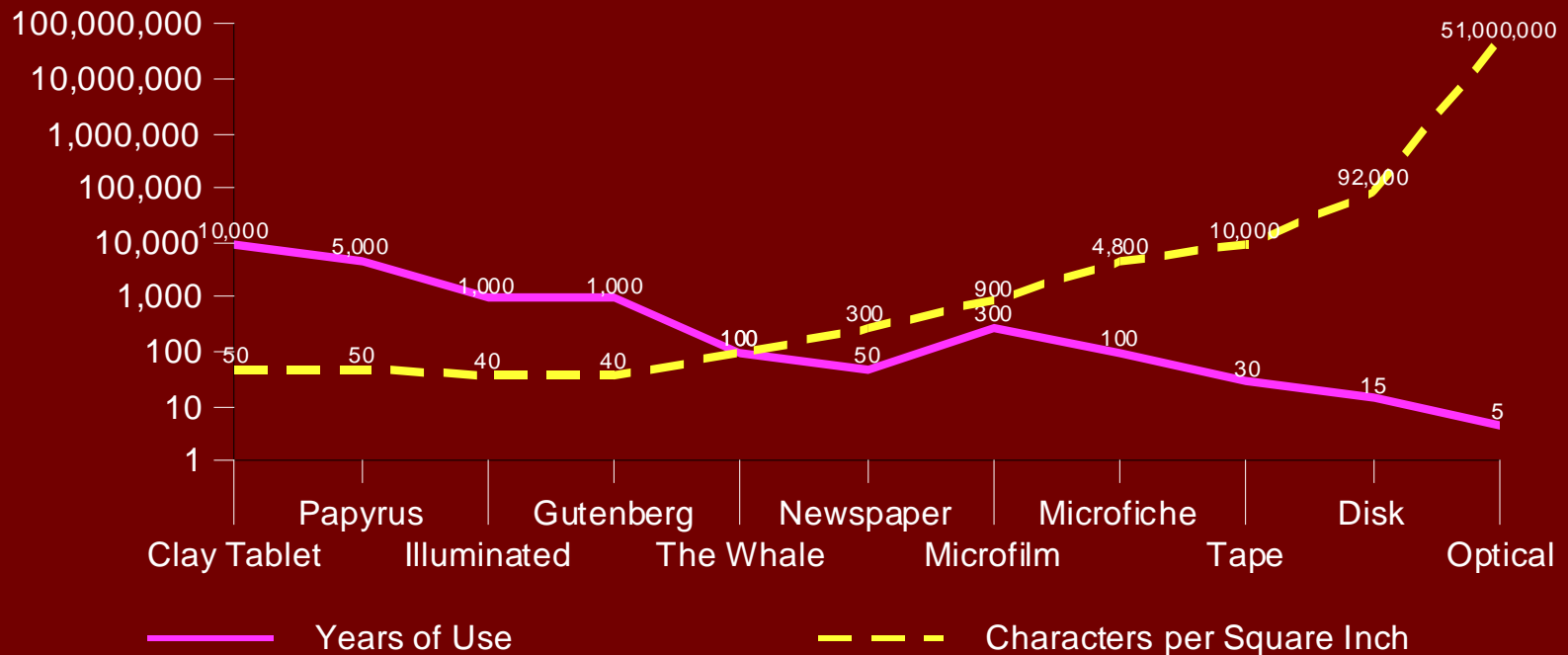
- Microfilming
- Lamination (ca. 1930-1950)
- Environmental standards
- Development of acid-free/permanent paper (post-1960)
- Preservation photocopying
- Polyester encapsulation

# 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





# 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 manipulated, 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

- "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.