

DATA PRESERVATION

Best Practices for preserving your research data for future reuse

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What types of data do you have?

Digital Data

Analog Data

The goal of data preservation is to ensure that your data is in a sustainable format that can be accessed and reused at some point in the future.

What types of data do you have?

Digital Data

The basics.....

Digital

...for digital data

- **Locate everything to be saved**
- **Decide what to keep**
- **Organize the files**
- **Save copies in different places & on different media**
- **Manage the collections**

Locate everything to be saved

Digital

Where are your data?

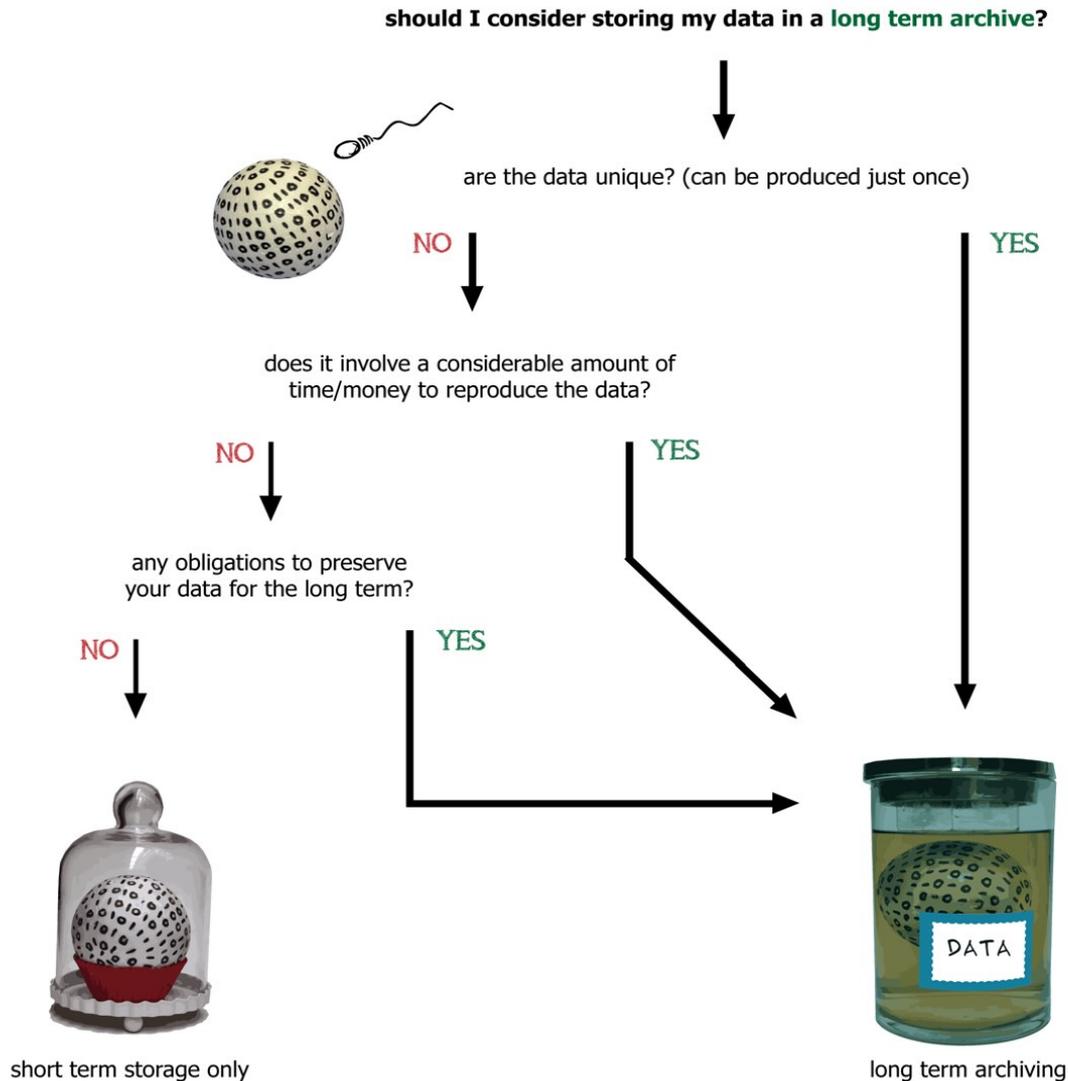
- Locate all of your data
- Transfer from older media - floppy disks, cassettes, 8-tracks, CDs
- Download data from social media sites and emails
- Transfer files from cameras and phones
- Collect it in one place
- Create a directory

Decide what to keep

Which research data should I preserve?

- Obligation to keep it for sharing or reuse
- Verification of the research
- Value of the data
- Uniqueness of the data
- Raw (primary) or processed (secondary) data
- General historical research (heritage)

Which research data should be archived?



Organize the files

How should I identify my data files?

- Descriptive file names
- Consistency
- Identify different versions clearly
- Simple folder names
- Include date/time information
- Predictable

Save copies in different places & different media

Digital

How should I keep my data?

- Backup your data
- Duplication
- Different formats
- Location, location, location
- 3-2-1
- Threat zones

Manage the collections

How do I actively manage my research data?

- Visit your data often
- Migrate to newer media
- Migrate to newer formats
- Migrate to newer software
- Verify data consistency
- Keep your directory up to date

What types of data do you have?

Analog Data

The basics.....

Analog

...for analog data

- **Locate everything to be saved**
- **Decide what to keep**
- **Organize the materials**
- **Scan analog materials into digital copies**
- **Preserve your primary source materials**
- **Manage the collections**

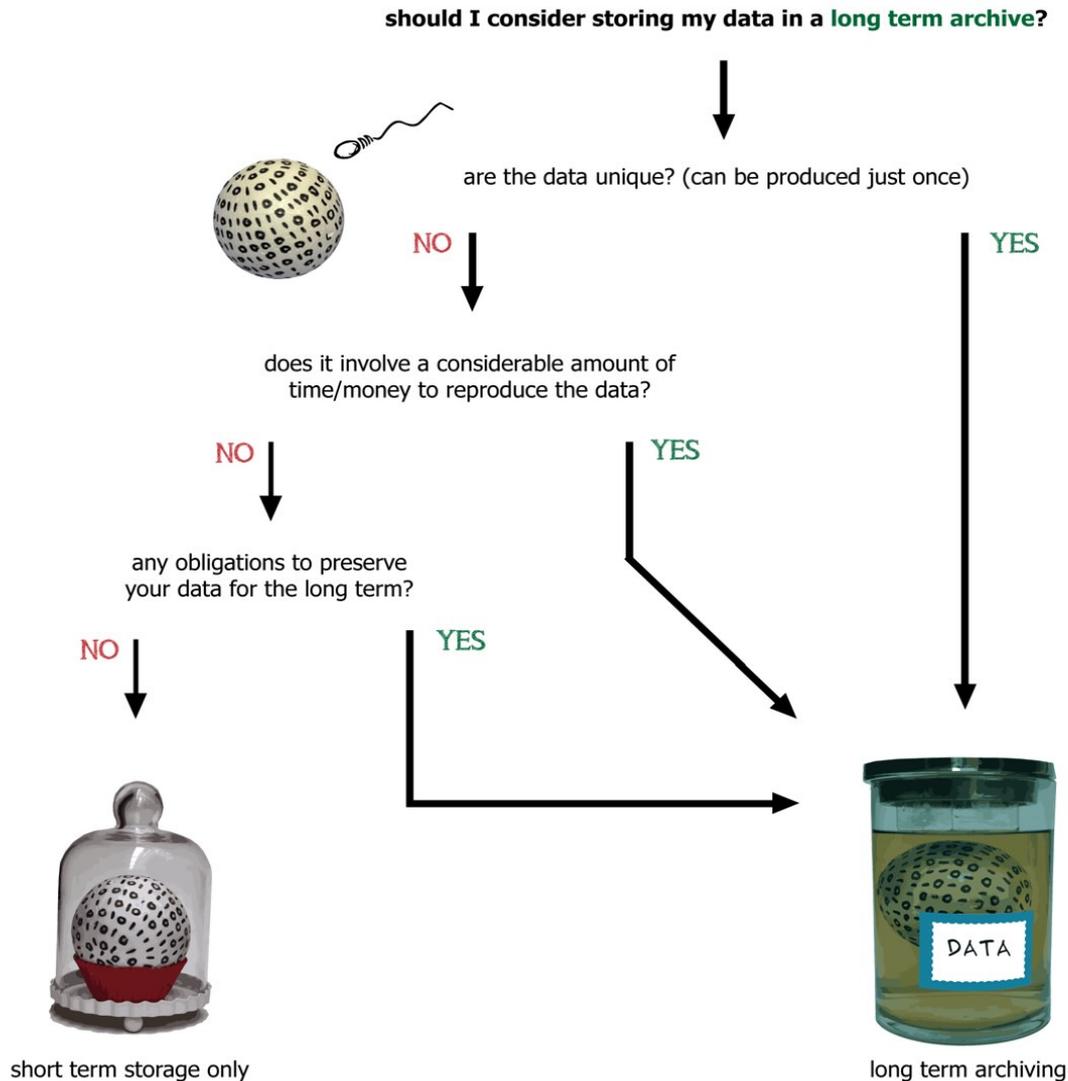
Locate everything to be saved

Analog

Where are your (data) source materials?

- Locate all of your source files
- Collect it in one place
- Identify the materials
- Create a directory

Which research data should be archived?



Decide what to keep

Which research materials should I preserve?

- Obligation to keep it for sharing or reuse
- Verification of the research
- Value of the materials
- Uniqueness of the materials
- Original materials vs. copied materials
- General historical research (heritage or cultural value)

Organize the files

How should I identify my source materials?

- Descriptive file names
- Consistency
- Identify different versions clearly
- Simple folder names
- Include date/time information
- Predictable

Scan analog materials into digital copies

Analog

Why should I scan my source materials?

- Digital files easier to work with
- Duplication
- Digital copies protect the source materials from wear
- Stable formats for different digital media
- 3-2-1

Manage the collections

How do I preserve my analog research materials?

- Understand sources of damage
- Recognize signs of deterioration
- Follow best practices for material storage and shelving

Why Materials Deteriorate

Common Reasons

- Chemical and physical composition
- Storage conditions
- Use and handling

Sources of Damage

Analog

Effects of poor care

- Prolonged exposure to heat and humidity
- Exposure to light
- Use of acidic adhesives and tapes
- Wear from use
- Poor quality storage materials
 - Alkaline buffered and acid-free papers and boards have only been available for the past 15-20 years.
 - Be suspect of plastics of unknown origin

Signs of Deterioration

Analog

Effects of poor care

- Photos fading and staining
- Documents yellowing or becoming brittle
- Torn or damaged documents
- Rolled and folded items than cannot be flattened without damage
- Books with loose or detached bindings
- Adhesives yellowing and failing
- Water damage and signs of mold

Storage Practices

Analog

Best Practices

- Cool and dry environmental conditions
- Provide good air circulation
- Avoid basements or attics for storage
- Do not place shelving along exterior walls or under skylights
- Avoid prolonged exposure to direct sunlight

Resources

Library of Congress: Personal archiving (digital)

<http://www.digitalpreservation.gov/personalarchiving/>

“Perspectives on Personal Digital Archiving” NDIIPP (LoC)

http://www.digitalpreservation.gov/documents/ebookpdf_march18.pdf

National Archives: Preservation

<http://www.archives.gov/preservation/index.html>

Selection of Research Data: Guidelines for appraising and selecting research data. (H. Tjalsma (DANS), J. Rombouts (3TU.Datacentrum)).

http://www.dans.knaw.nl/sites/default/files/file/publicaties/Selection_of_research_data_DEF.pdf

Questions?

Thanks for attending

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RESEARCH DATA SERVICES

Offering expert data assistance at every stage of the research process.

1: PLANNING

We can assist you with developing a data management plan and designing your planned data analysis, including:

- Implementing plans, using tools, and creating workflows for managing research data
- Advising on study design, power analysis, and choice of statistical methods
- Helping to meet increasingly stringent criteria from funding agencies

2: FINDING & COLLECTING

We have access to thousands of sources of data and experts who will help you:

- Locate, evaluate and format data
- Create metadata and data documentation protocols for new data collection
- Capture data using best practices and appropriate technology

3: ANALYZING

Get expert assistance from statistical, spatial, or media specialists to analyze your data and present your research:

- Learn to use cutting-edge tools and methods
- Experiment with high-resolution visualization technologies
- Develop graphical representations that bring impact to your analysis

4: SHARING & ARCHIVING

We can consult with you on strategies to help others discover or access your research by:

- Adhering to data sharing policies and norms
- Selecting a data-sharing repository
- Making your data easier to discover and reuse

