Data Sharing and Re-Use: Barriers and Incentives

Carol Tenopir
University of Tennessee
ctenopir@utk.edu
Sharing…
Sharing…
Reciprocity
Data Lifecycle

Plan
Collect
Assure
Describe
Preserve
Integrate
Discover
Analyze
Researchers might...

Plan

Analyze

Collect

Integrate

Assure

Discover

Describe

Preserve
DataONE Assessment of Stakeholders

Data Managers
- Scientists
- Students & Teachers

Public Officials
- Citizen-scientists

Publishers
- Libraries & Librarians

Scientists
- Citizen-scientists
We are learning about Scientists

1st Scientist Survey (2011)

Views: 41,449
Citations: 273
Shares: 75
(pub. Jun. 2011)

2nd Scientist Survey (2015)

Views: 10,868
Citations: 27
Shares: 175
(pub. Aug. 2015)
Third Scientist Survey

- Closed this month
- ~1400 responses
- Analyzing data now
Respondents from Scientist Surveys
Most are willing to share at least some data

How much of your data would you make available to others?

2015, n=833

- None of it: 9.5%
- Some of it: 43.1%
- Most of it: 31.8%
- All of it: 15.6%
Some is different from all in data repositories, too

I am willing to...

Place all of my data into a central data repository (2015)

Place at least some of my data into a central repository (2015)
Although 80% of scientists agree, “I share my data,”

Only 46% agree, “Others can access my data easily.”
And, lack of access to data …

… is a major impediment to progress in science

75% agree or strongly agree.

… has restricted my ability to answer scientific questions

53% agree or strongly agree.
Most agree in principle with data sharing or re-use

Willing to share data across a broad group of researchers
- 81% in 2011
- 88% in 2015

Use others' datasets if their data were easily accessible
- 84% in 2011
- 88% in 2015

It is appropriate to create new datasets from the shared data
- 76% in 2011
- 80% in 2015
But some conditions must be met…

- Formally cite provider/funder: 93% (2015) to 95% (2011)
- Acknowledge provider/funder: 94% (2015) to 93% (2011)
- Opportunity to collaborate: 75% (2015) to 81% (2011)
- Reciprocal sharing agreement: 58% (2015) to 72% (2011)
- Reprints of articles: 55% (2015) to 70% (2011)
- Complete list of products: 54% (2015) to 69% (2011)
Barriers for scientists (2015)

- I need to publish: 44%
- Insufficient time: 39%
- I don’t have rights: 26%
- Lack of funding: 25%
- Do not need data: 25%
- Lack of standards: 18%
- No place to put data: 18%
- Should not be available: 13%
- Insufficient skills: 13%
What metadata do you currently use to describe your data? (2015)

- DIF: 1.70%
- DwC: 2%
- DC: 7%
- Open GIS: 7%
- FDGC: 8.50%
- EML: 9.30%
- ISO/Other ISO: 10.20%
- Lab standard: 16.70%
- None: 47.90%
How can barriers be overcome?
1. Flexible conditions

- Links to/from published articles
- Metadata-only exposure or embargoes
- Access controls
2. Collaboration & Assistance From Data Managers and Librarians

- [https://dmp.cdlib.org/](https://dmp.cdlib.org/)
- [https://www.dataone.org/software-tools/dmp-tool](https://www.dataone.org/software-tools/dmp-tool)
3. Education and Training

Data deluge

Data is collected from sensors, sensor networks, remote sensing, observations, and more - this calls for increased attention to data management and stewardship.

https://www.dataone.org/education-modules
Assistance with training

http://datalib.edina.ac.uk/mantra/

Working Group on Scientific Information Infrastructures
Tools for RDS Education and Training

https://www.dataone.org/education-modules
DataONE Education Modules

1. Why Data Management
2. Data Sharing
3. Data Management Planning
4. Data Entry and Manipulation
5. Data Quality Control and Assurance
6. Protecting Your Data
7. Metadata
8. How to Write Quality Metadata
9. Data Citation
10. Analysis and Workflows
11. Legal and Policy Issues
Libraries…

• Facilitate interdisciplinary work and data knowledge through collections and services
• Understand metadata
• Know how to find information about data
• In partnership with other administrative units can take a leadership role in a variety of research data services
European Survey Builds on DataONE Surveys

1st Library (2012)

Citations: 104
(published June 2012)

2nd Library (2015)

Citations: 23
2,148 downloads
(published Dec 2015)

Survey Respondents
- North: 19%
- West: 51%
- South: 13%
- East: 17%

LIBER Academic Library Membership
- North: 15%
- West: 53%
- South: 17%
- East: 16%
Key Findings

1. LIBER academic libraries offer a range of Research Data Services, but...

2. Consultative RDS are most common
1) LIBER academic libraries offer a range of Research Data Services
RDS offered by most libraries currently

- Discussing RDS with others: 77%
- Involved in policy development/planning: 66%
- Training colleagues on RDS: 54%
- Consulting on data management plans: 46%
- Consulting on data and metadata standards: 44%
- Outreach/collaboration with other RDS providers: 43%
RDS offered continued

- Providing tech. support for RDS: Technical (38%)
- Providing ref. support for finding/citing data: Consultative (37%)
- Creating webguides: Consultative (35%)
- Direct participation with researchers: Consultative (32%)
- ID datasets: Technical (26%)
2) Consultative are more commonly offered than technical RDS
Currently offered and future plans for consultative-type services
Currently offered and future plans for technical-type services
We also know...

- There is great variation between libraries
- Some universities and some countries within a region are ahead in RDS
Thanks to the LIBER Study Team!


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Carol Tenopir
University of Tennessee
ctenopir@utk.edu