Research Data Management Implementation Utilizing Dataverse

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IQSS
The Institute for Quantitative Social Science
HARVARD UNIVERSITY

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Assistant Director of Computing
and Archival Research

UNC
THE ODUM INSTITUTE

Science in the Digital Age

Raw Data
(Collect, Store
& Analyze)
Research computing
facilities,
Domain specific
databases

Research
Results

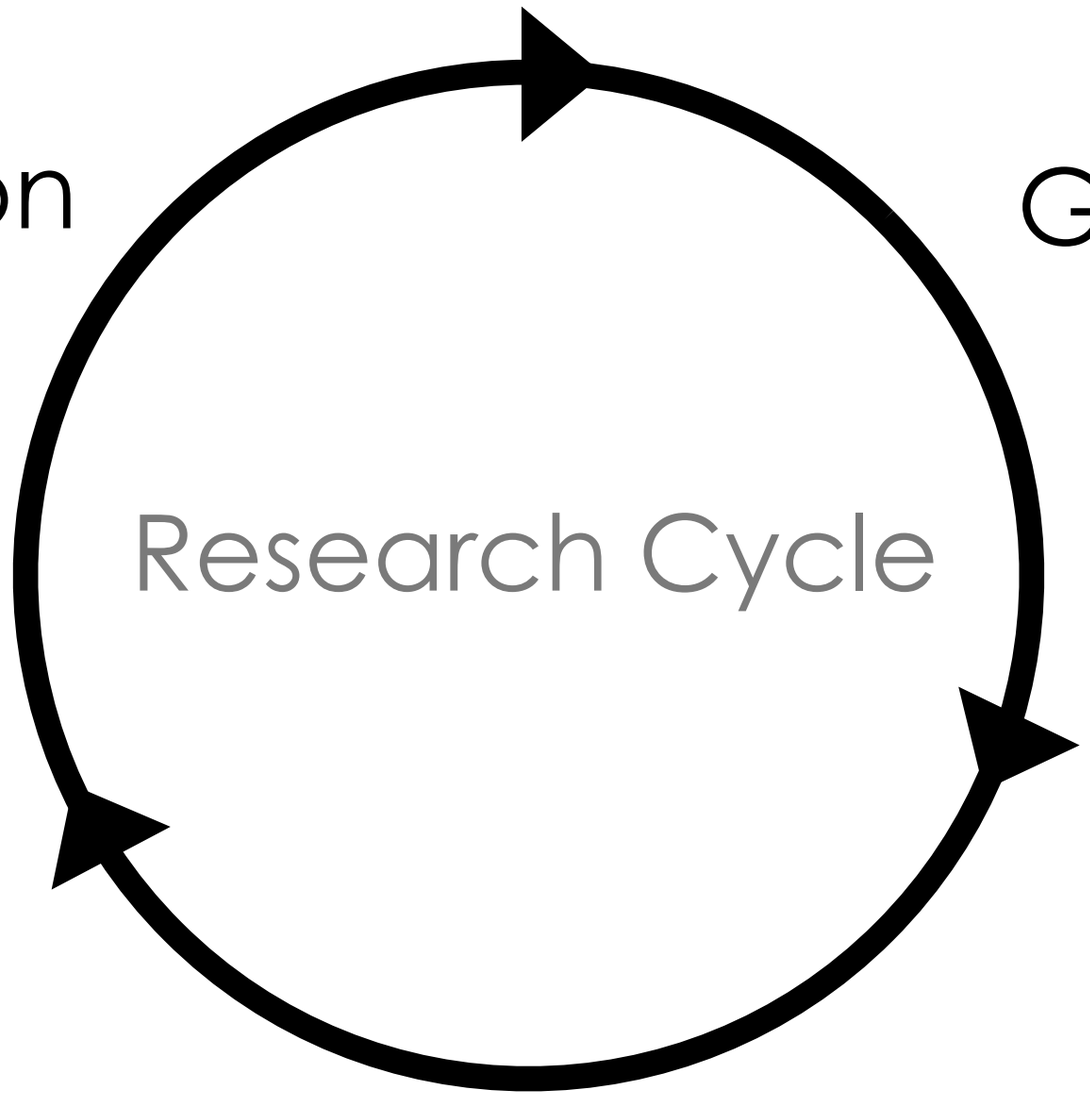
Publications,
Presentations,
& Grant Results
Journals, Books,
Reports, Web Sites

Data citation

Final Data, Code
& other Materials
(Share, Cite &
Archive)
**The Dataverse
Network**

Project Idea
Grant Proposal

Publication



Data Collection,
Processing and
Analysis

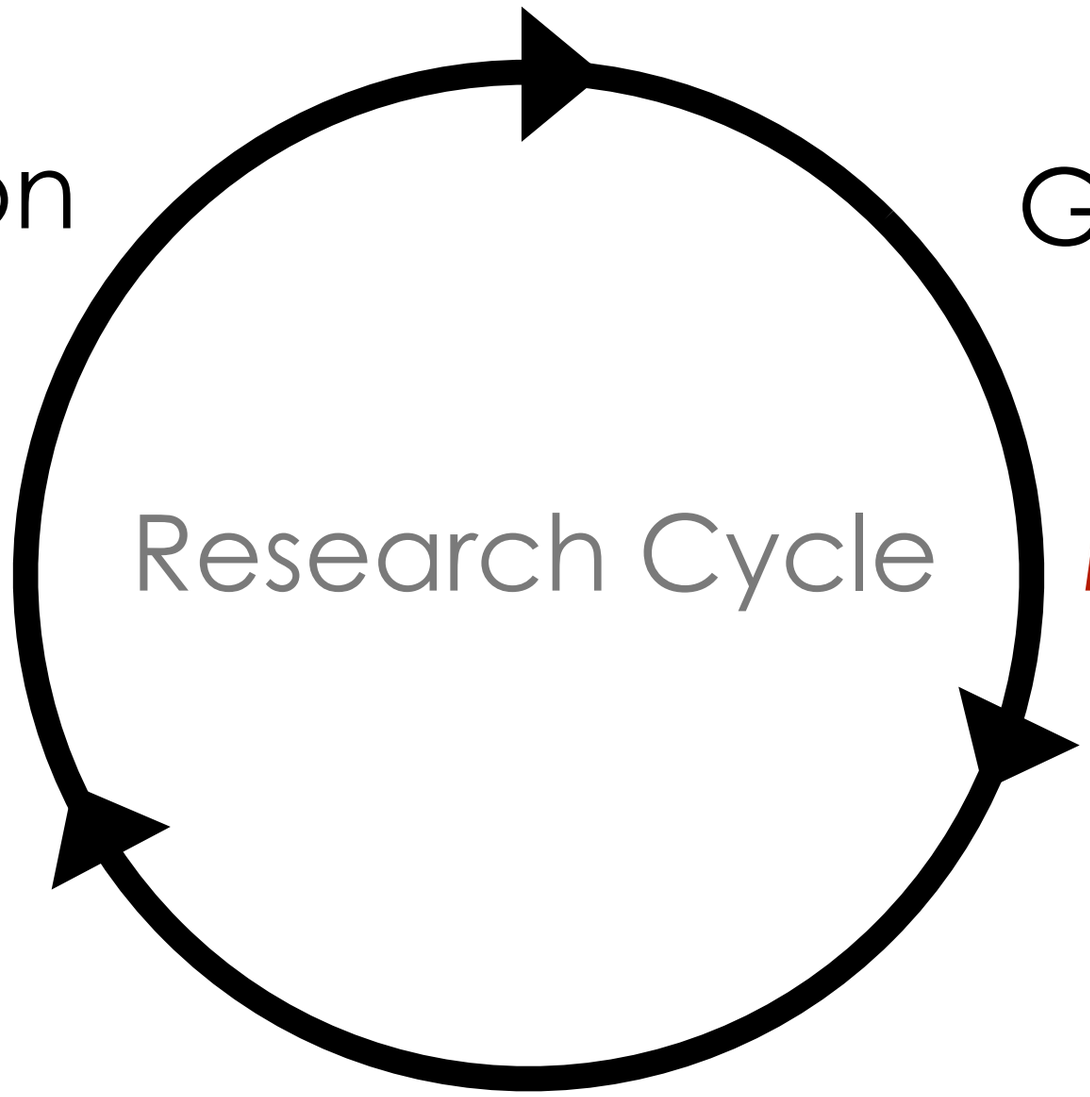
Project Idea
Grant Proposal

Data
Management
Plan!

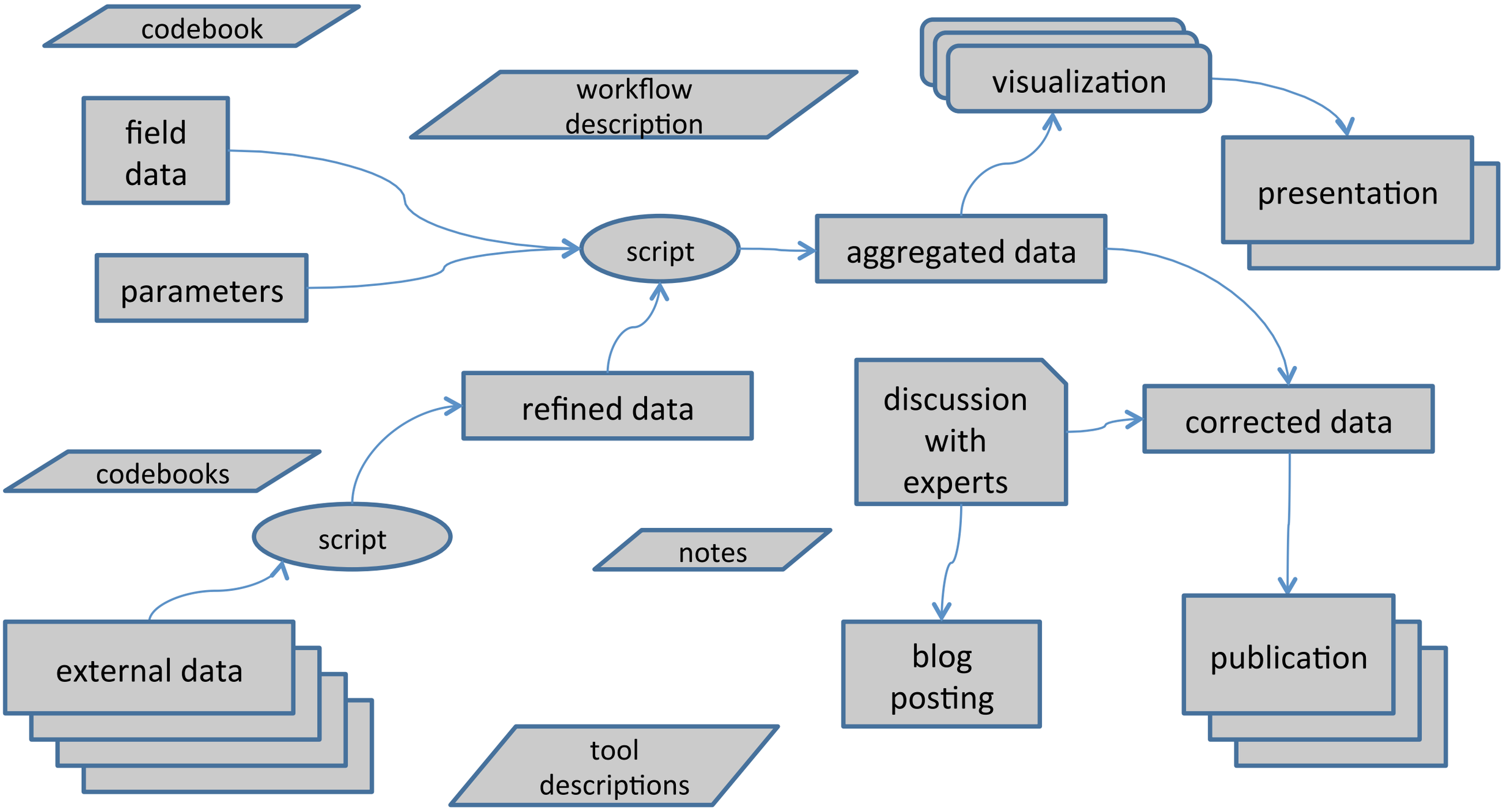
Data Collection,
Processing and
Analysis

Data
Sharing
and
Archiving

Publication



Which Data?



Slide acknowledgment: Andrea Goethals

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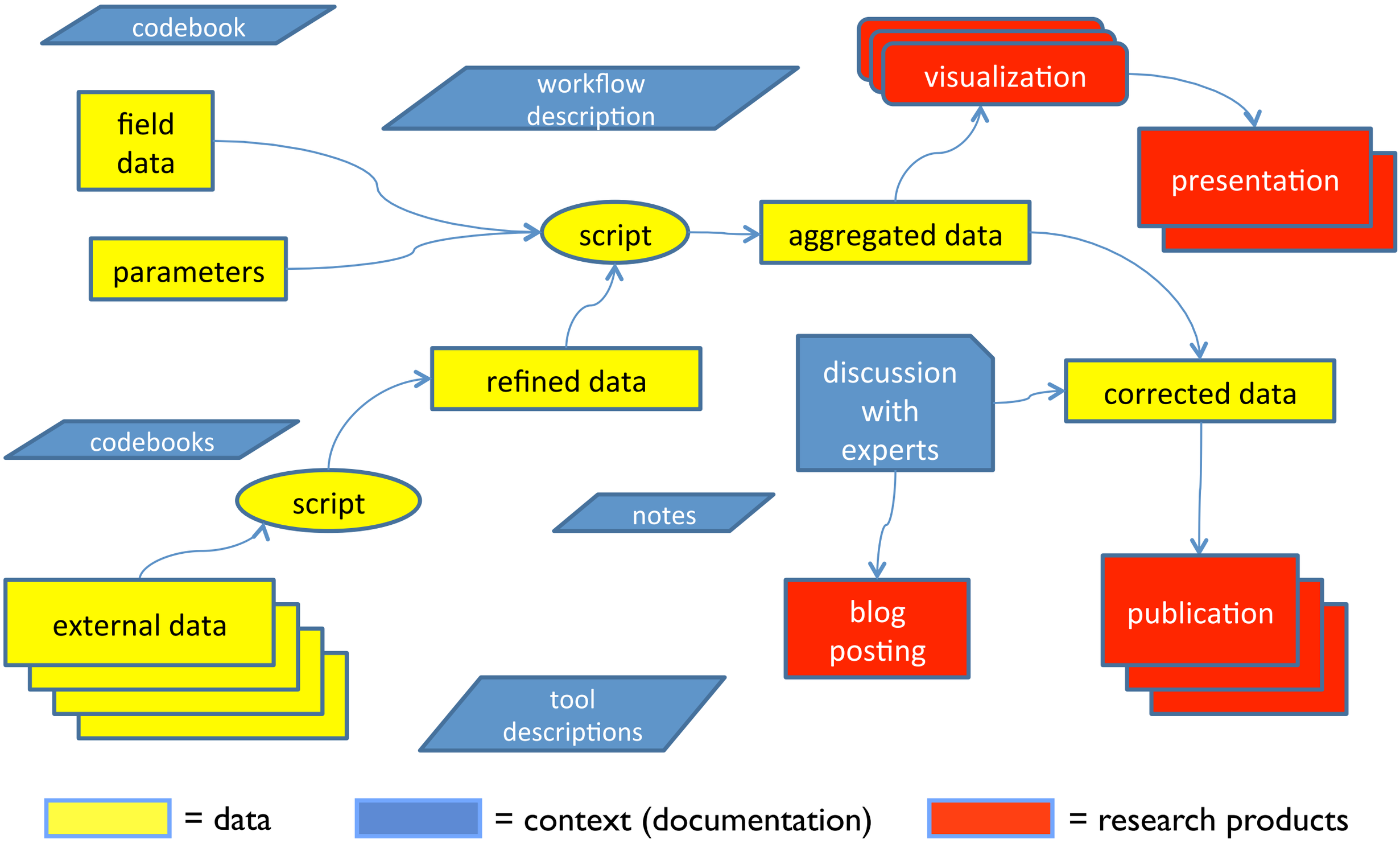

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Assortment of Data Types?

- Survey data
- Weather measurements
- Computer models
- Simulation outputs
- Software
- Input data
- Federated queries
- Geospatial data
- Enumerations
- Vital statistics
- Interviews
- Transcripts
- Medical and genetic data
- Scripts
- Administrative records
- Field data
- Bio images
- Experimental data
- Spreadsheets
- Visualizations
- Instrument outputs
- Structured data products
- Database
- Quantitative tabular data
- Qualitative data
- Recordings

The Dataverse Network

The Dataverse Network

A repository for research data that takes care of long term preservation and good archival practices, while the researcher keeps control of and gets recognition for his data

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Researcher

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Researcher

- ✓ Deposits data and enters metadata

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- ✓ Backups and replication of data in different locations (LOCKSS)

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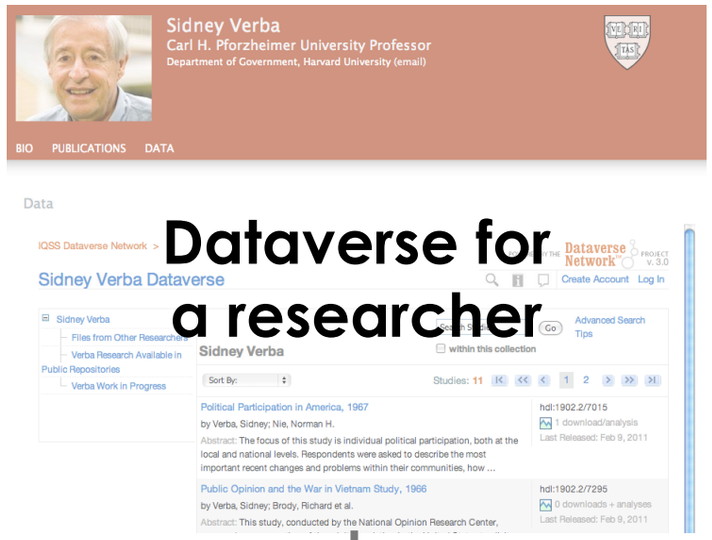
- ✓Backups and replication of data in different locations (LOCKSS)
- ✓Conversion to archival formats
- ✓Extraction of Metadata from data sets
- ✓Metadata standards (DDI, Dublin Core)
- ✓Inter-operability (OAI, APIs)

Dataverse Network (centralized repository)



Dataverse for a researcher

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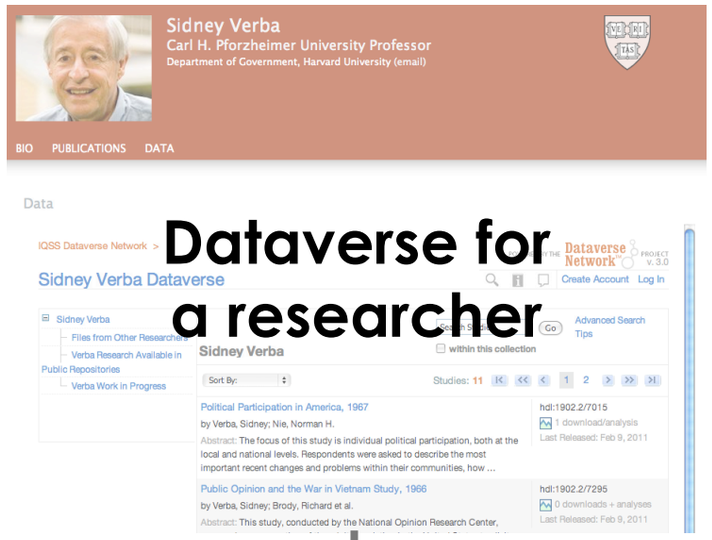

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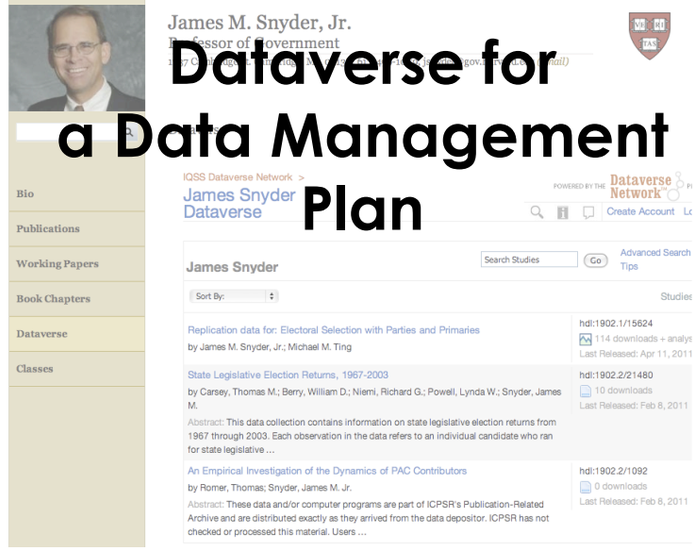

Dataverse for a Data Management Plan

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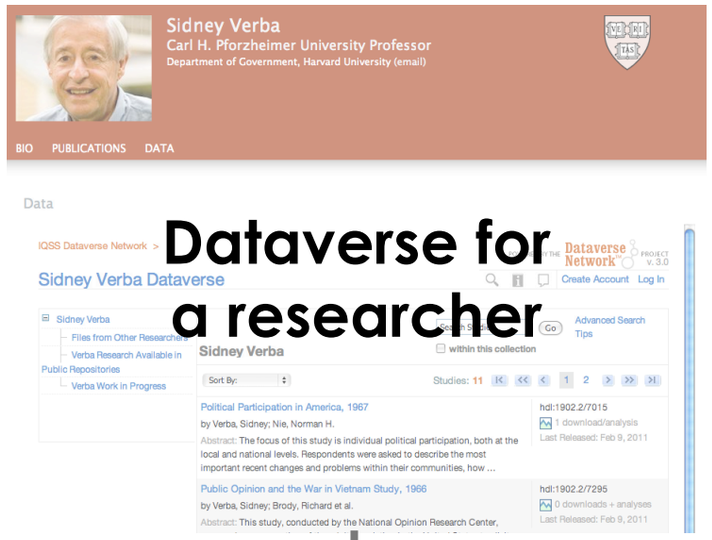

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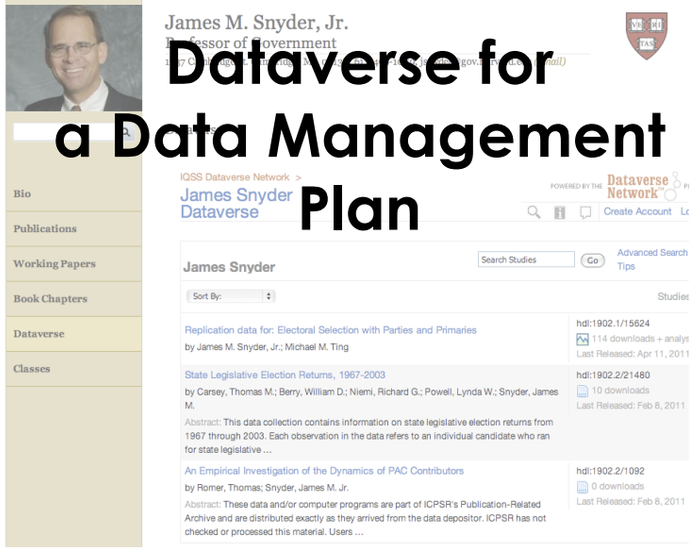

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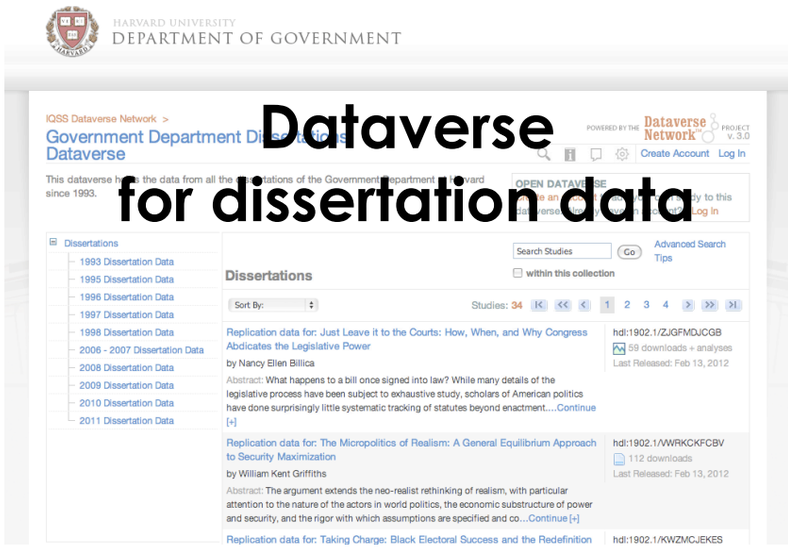
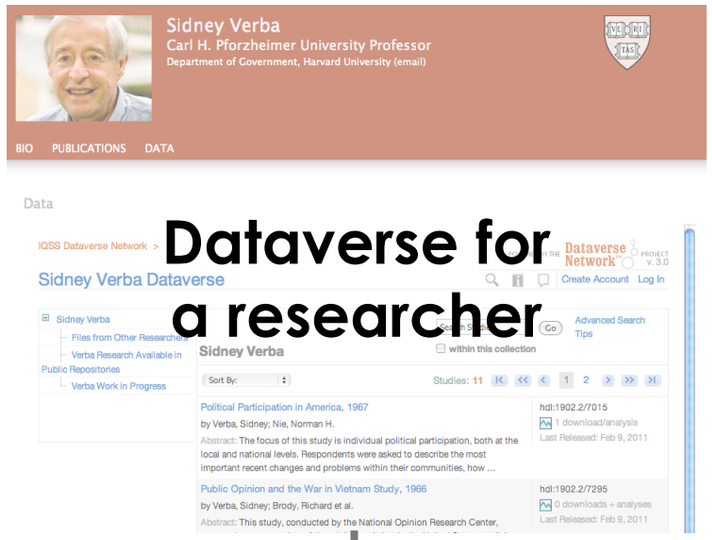


Dataverse for dissertation data



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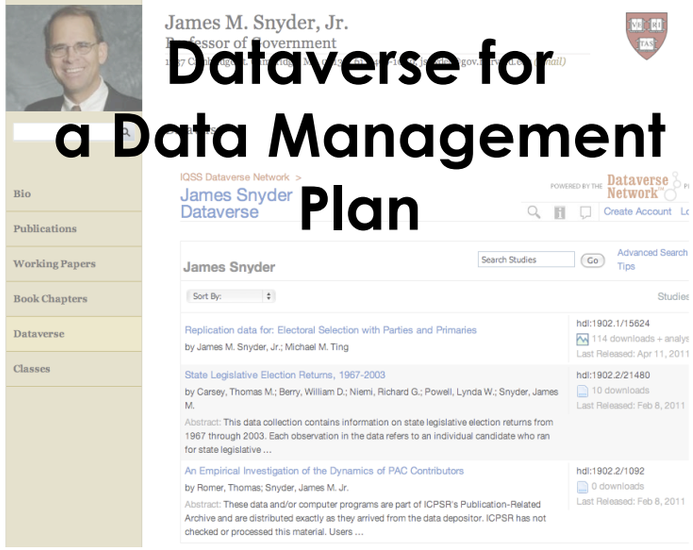

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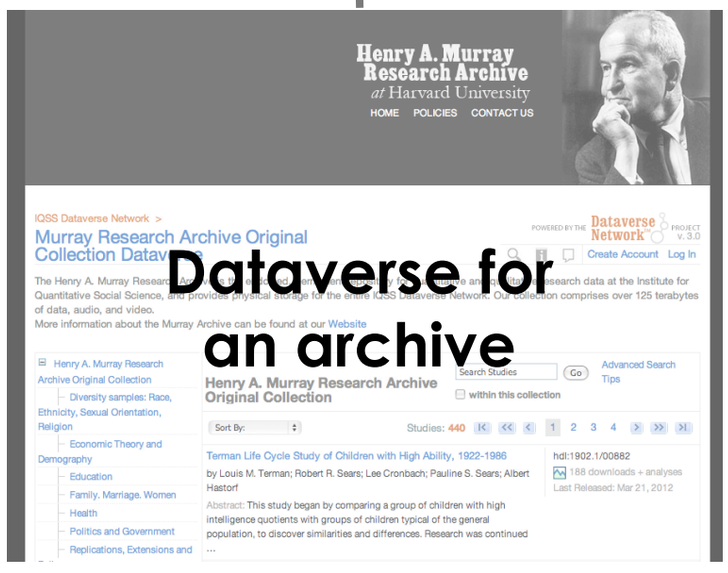
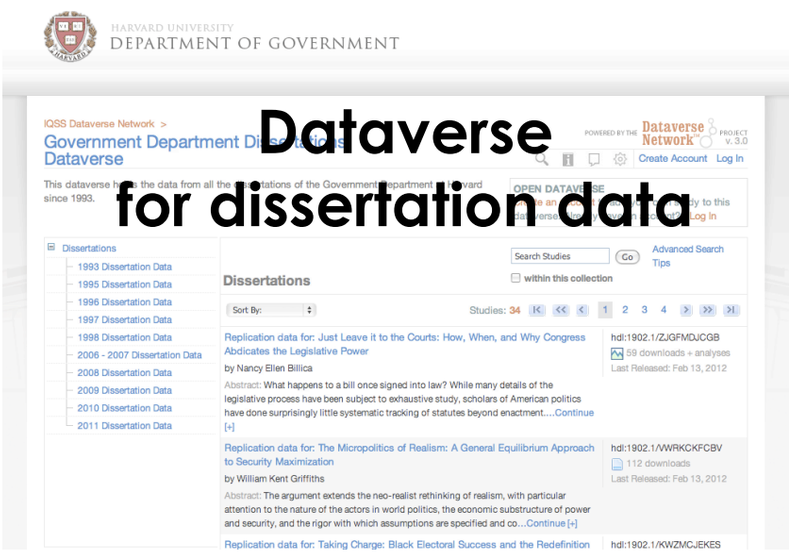


Dataverse for an archive



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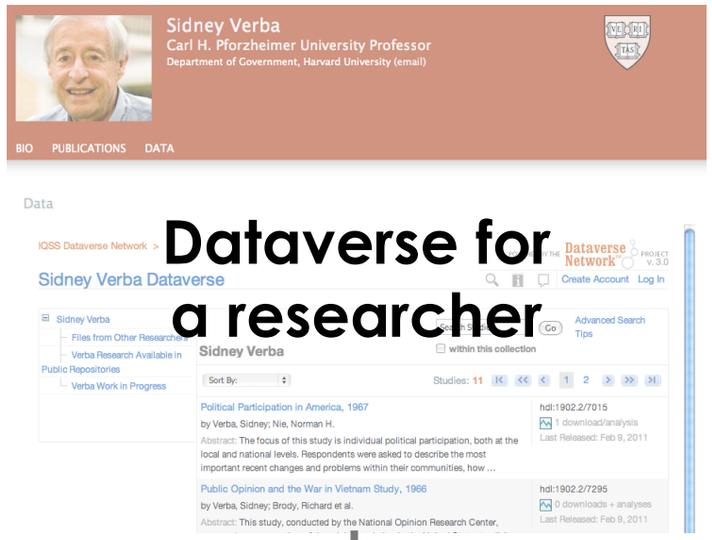

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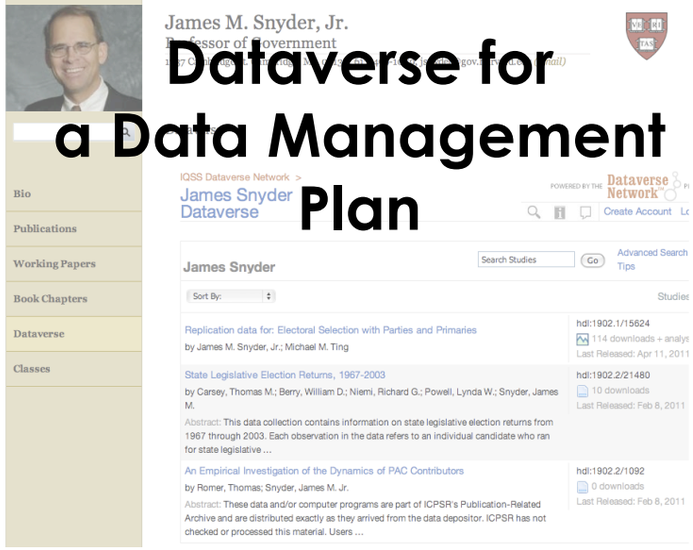

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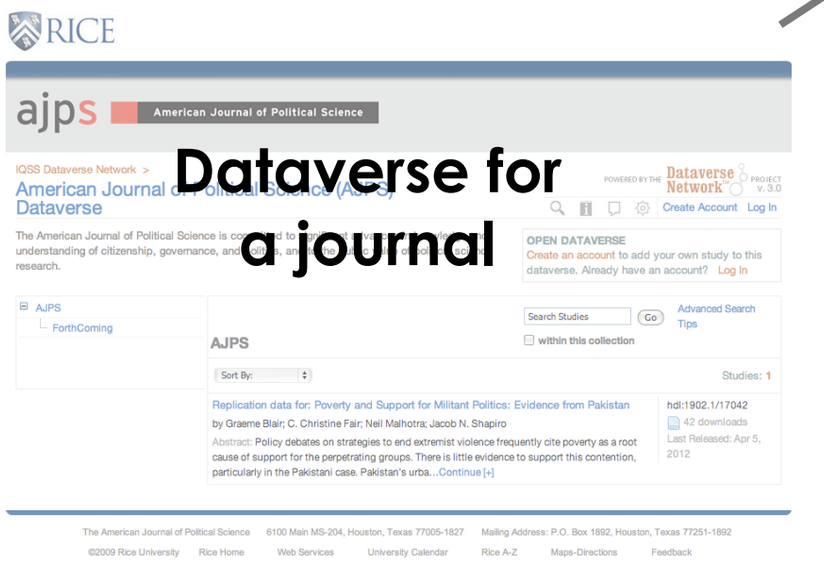
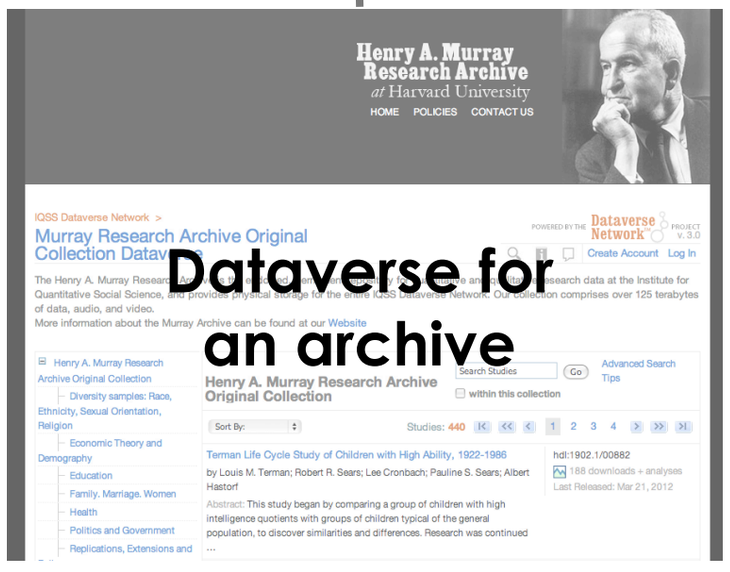


Dataverse for a journal



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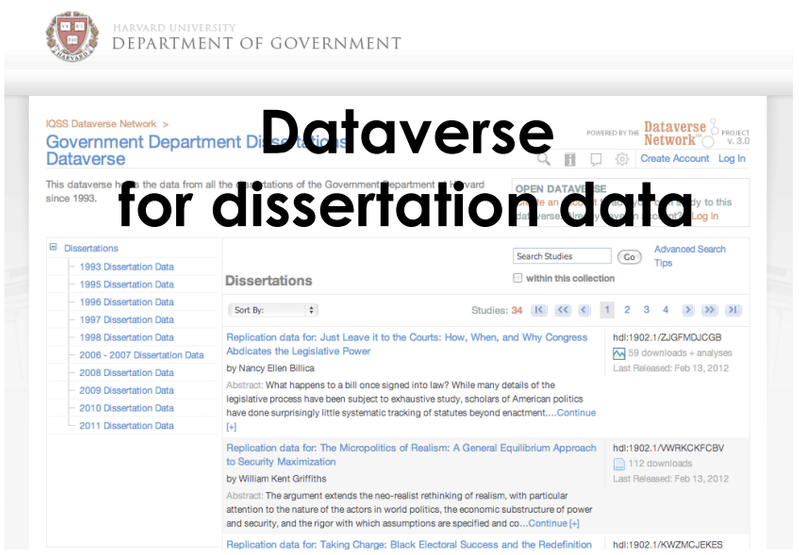
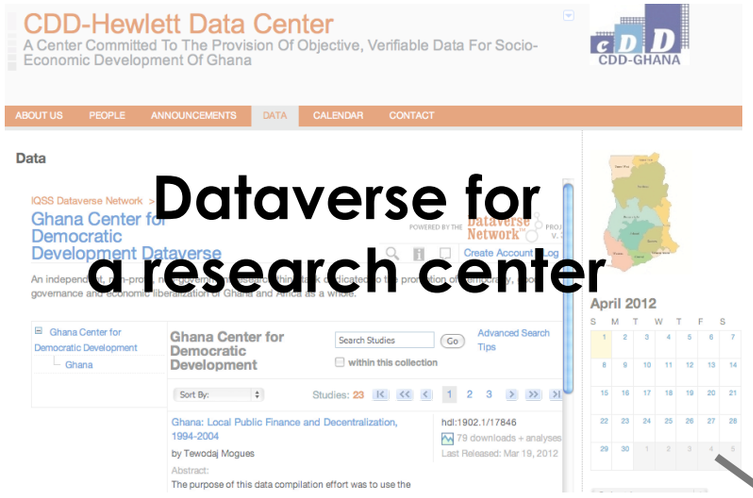


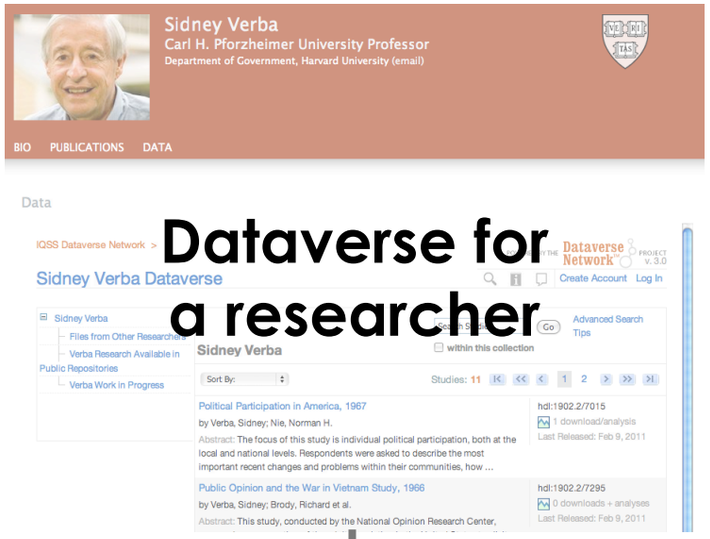
Dataverse for dissertation data

Dataverse Network (centralized repository)

Dataverse for a research center



Dataverse for a researcher



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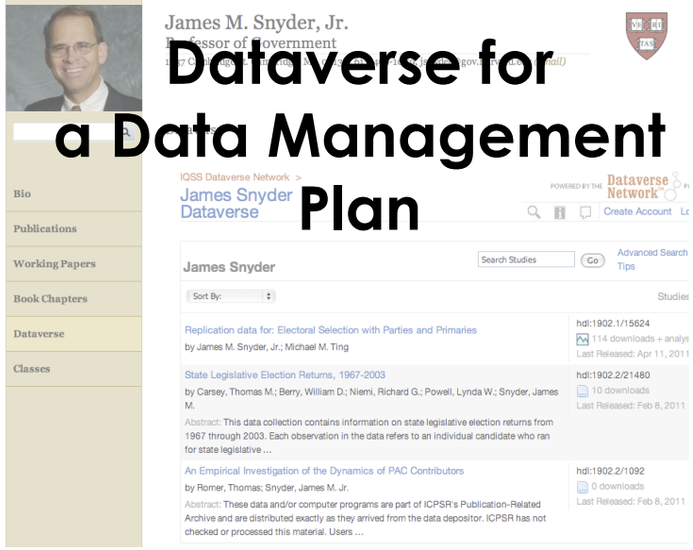

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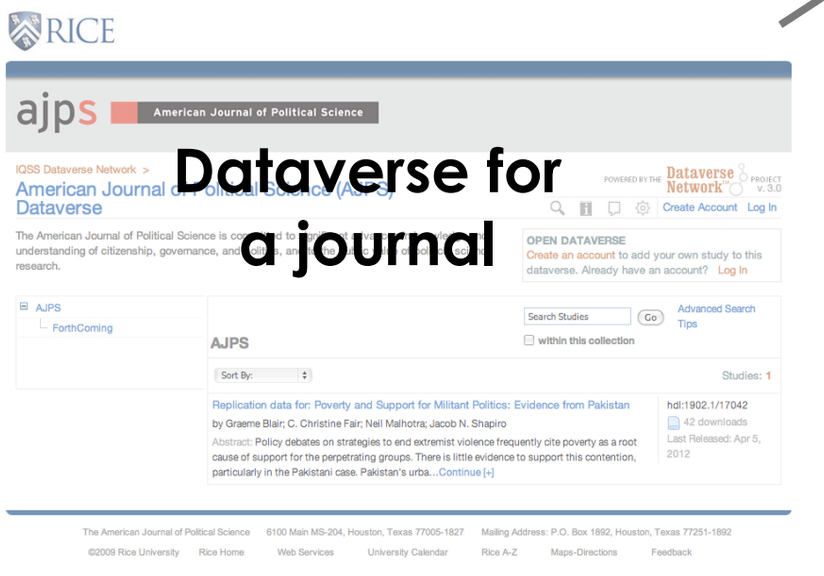

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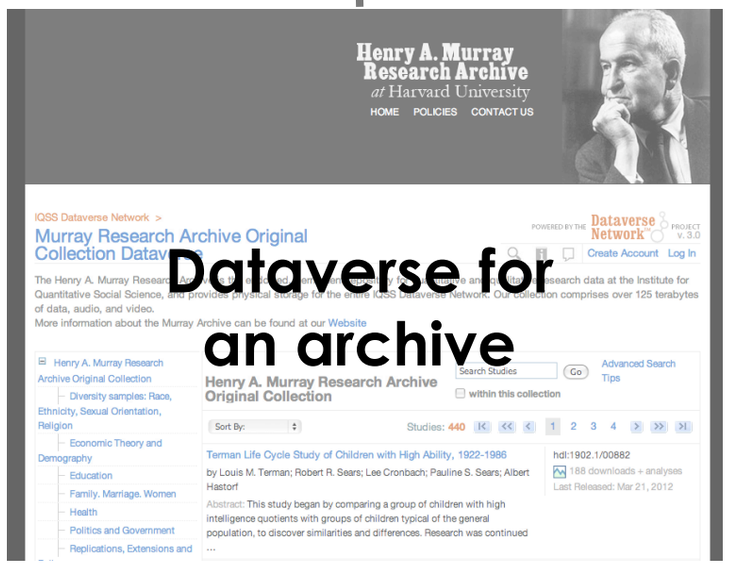

Dataverse for dissertation data

Dataverse Network (centralized repository)

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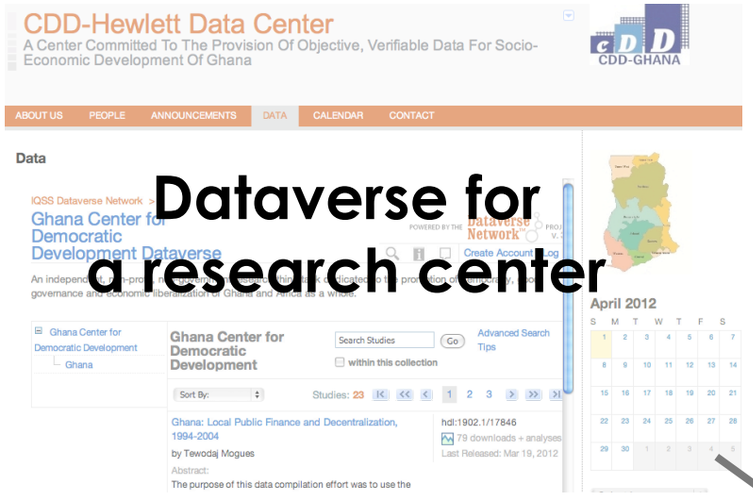

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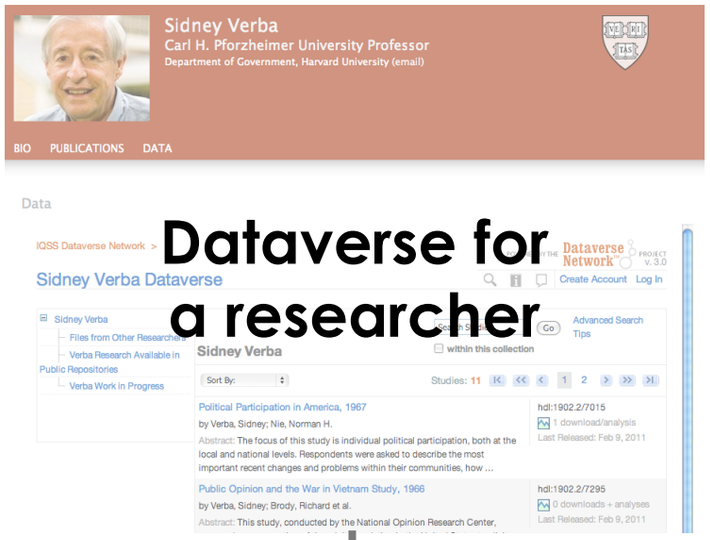

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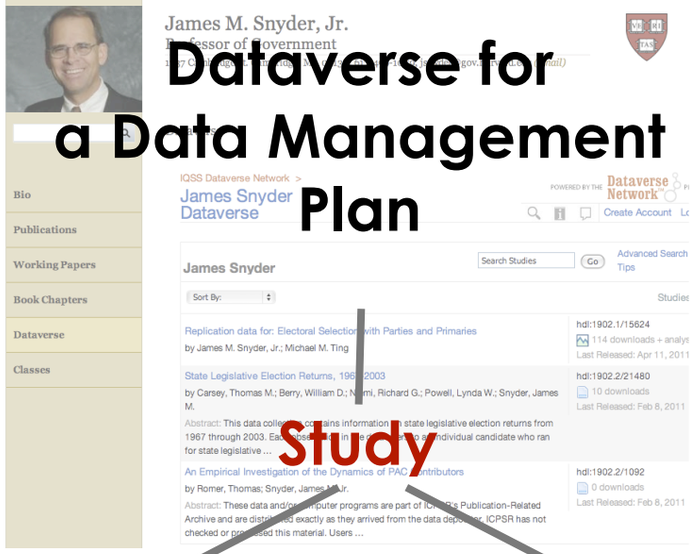
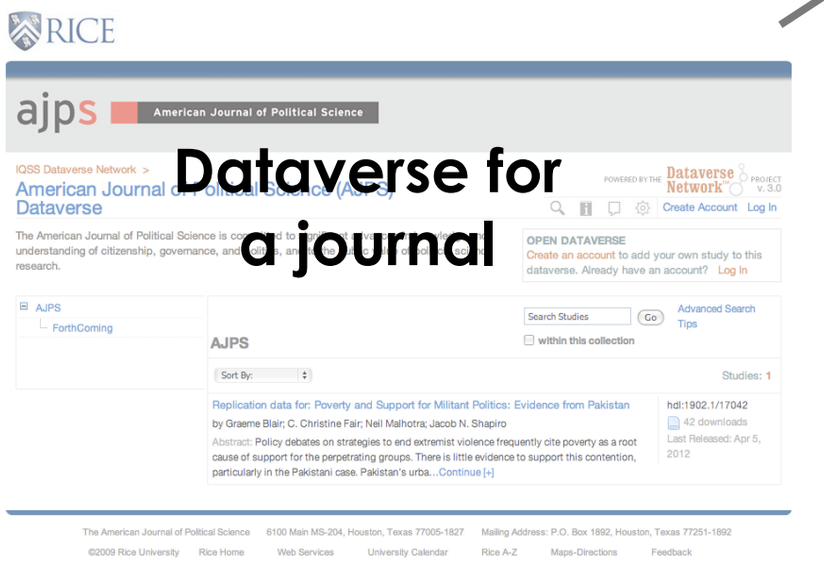


Study

Metadata

Data Files

Dataverse for a journal



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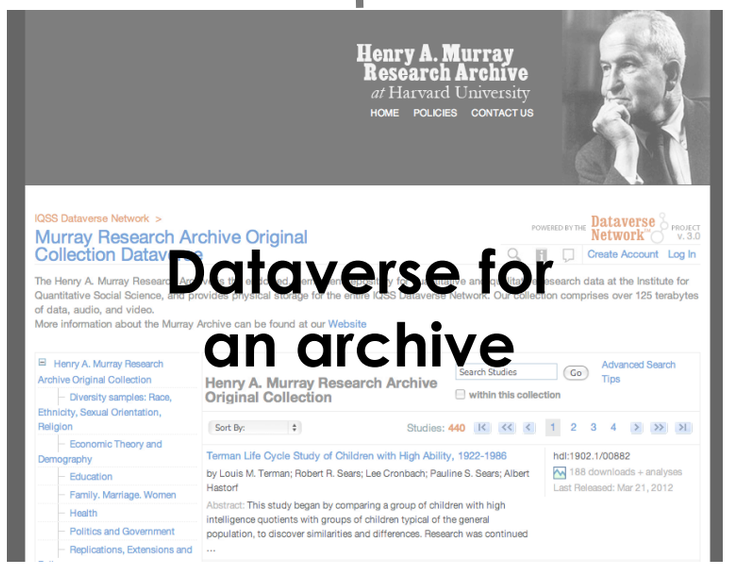

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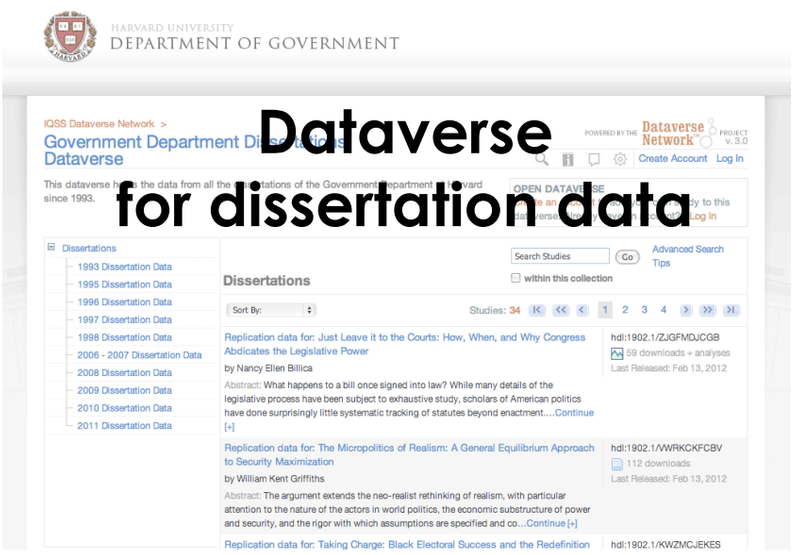

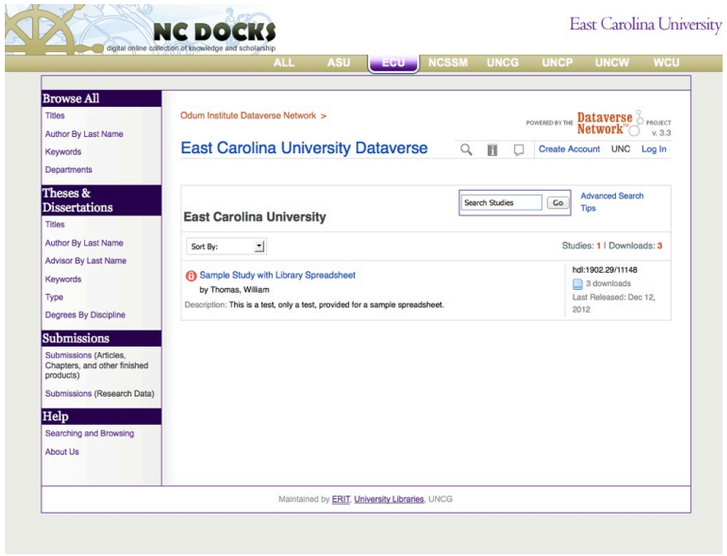
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by Thomas, William
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hdl:1902.29/11148
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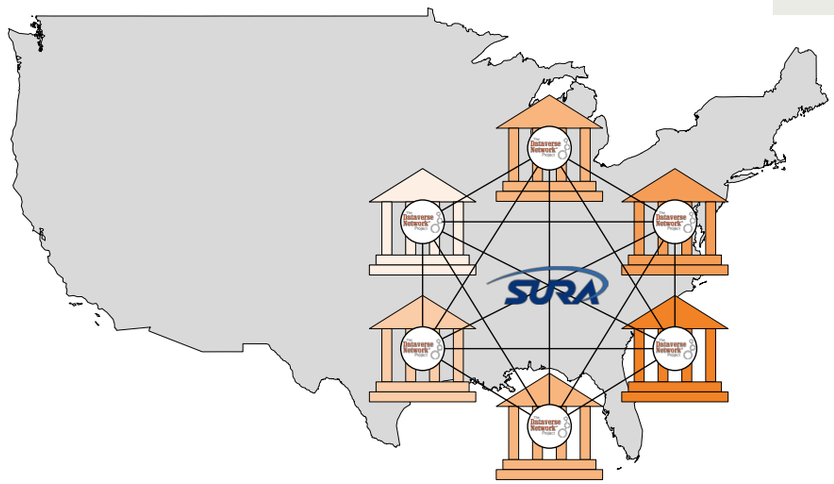
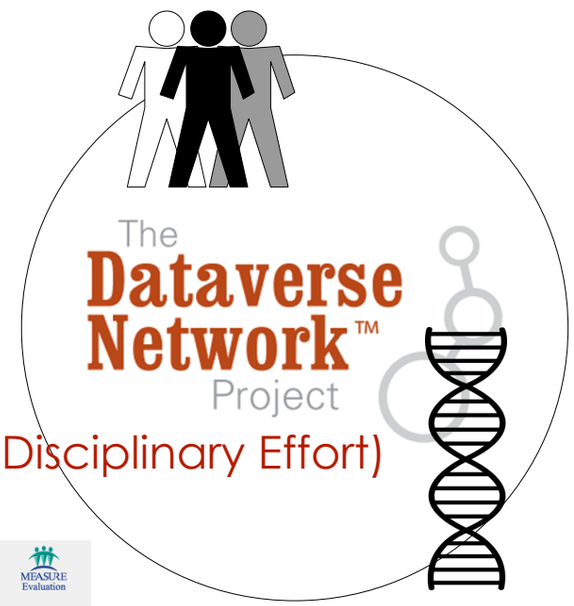
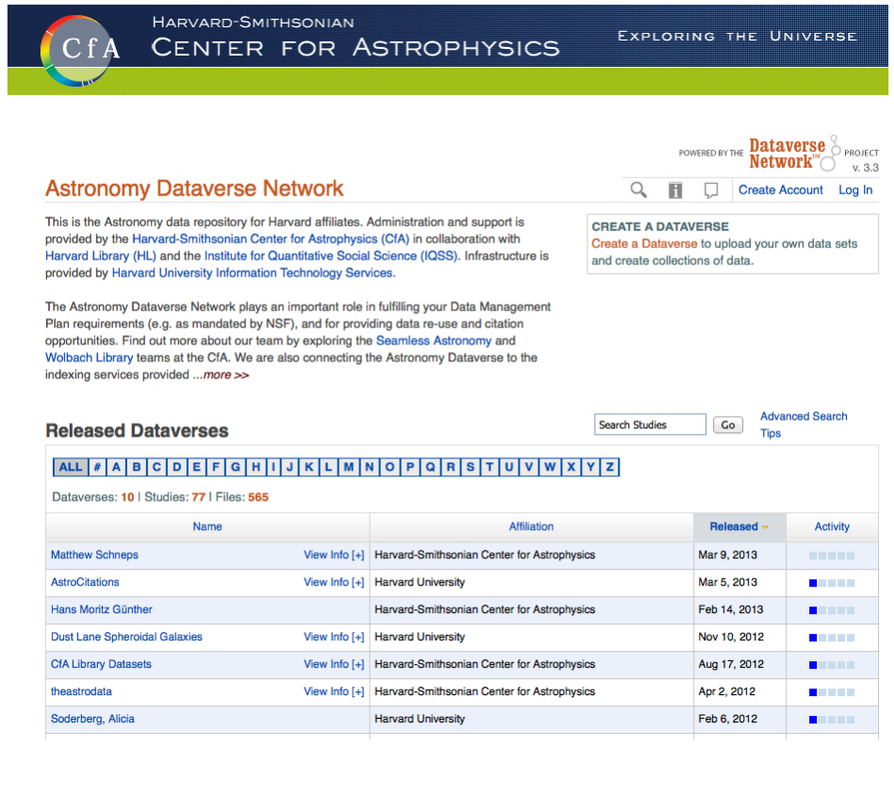

SURA


The
Dataverse
Network™
Project
(Multi-Disciplinary Effort)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Center for Astrophysics
Exploring the Universe
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The Astronomy Dataverse Network plays an important role in fulfilling your Data Management Plan requirements (e.g. as mandated by NSF), and for providing data re-use and citation opportunities. Find out more about our team by exploring the Seamless Astronomy and Wolbach Library teams at the CfA. We are also connecting the Astronomy Dataverse to the indexing services provided ...more >>
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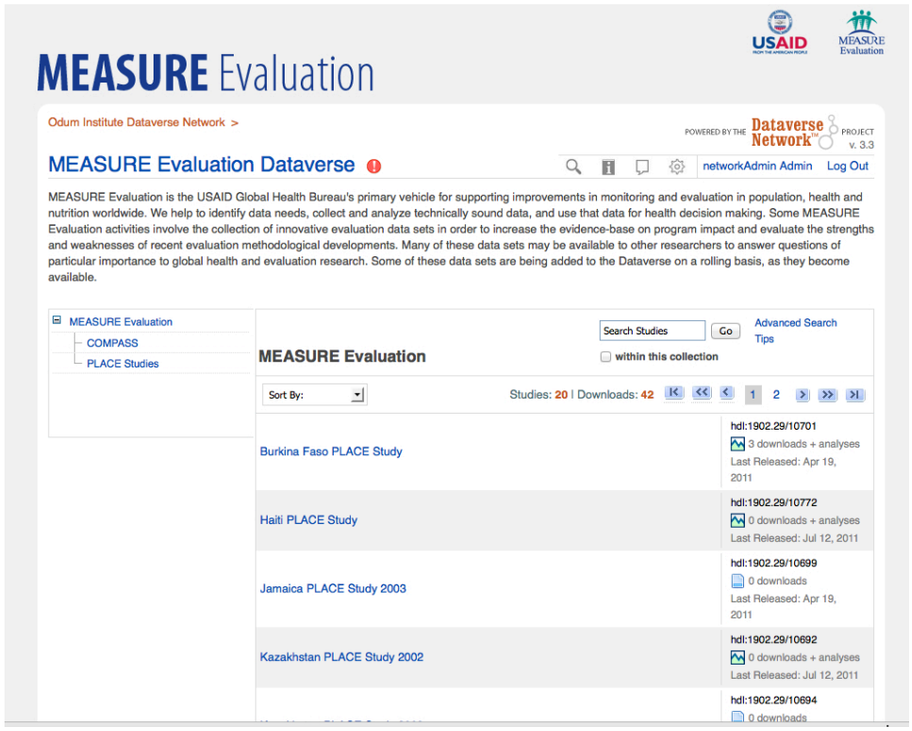
Soderberg, Alicia Harvard University Feb 6, 2012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MEASURE Evaluation Dataverse
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MEASURE Evaluation is the USAID Global Health Bureau's primary vehicle for supporting improvements in monitoring and evaluation in population, health and nutrition worldwide. We help to identify data needs, collect and analyze technically sound data, and use that data for health decision making. Some MEASURE Evaluation activities involve the collection of innovative evaluation data sets in order to increase the evidence-base on program impact and evaluate the strengths and weaknesses of recent evaluation methodological developments. Many of these data sets may be available to other researchers to answer questions of particular importance to global health and evaluation research. Some of these data sets are being added to the Dataverse on a rolling basis, as they become available.
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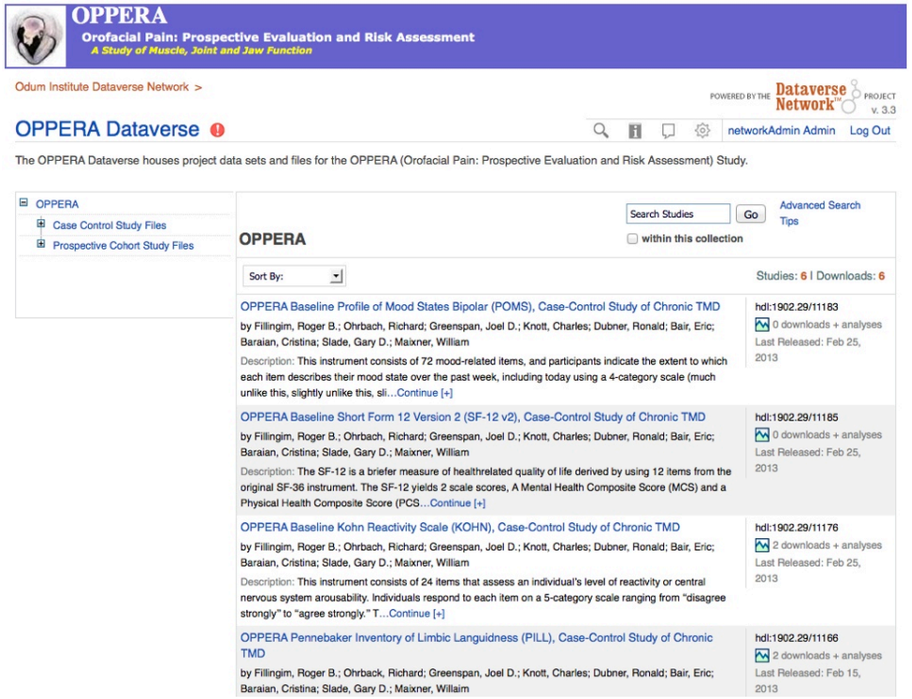
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A Study of Muscle, Joint and Jaw Function
Odum Institute Dataverse Network >
POWERED BY THE Dataverse Network™ PROJECT v. 3.3
OPPERA Dataverse
networkAdmin Admin Log Out
The OPPERA Dataverse houses project data sets and files for the OPPERA (Orofacial Pain: Prospective Evaluation and Risk Assessment) Study.
OPPERA
Case Control Study Files
Prospective Cohort Study Files
OPPERA
Search Studies Go
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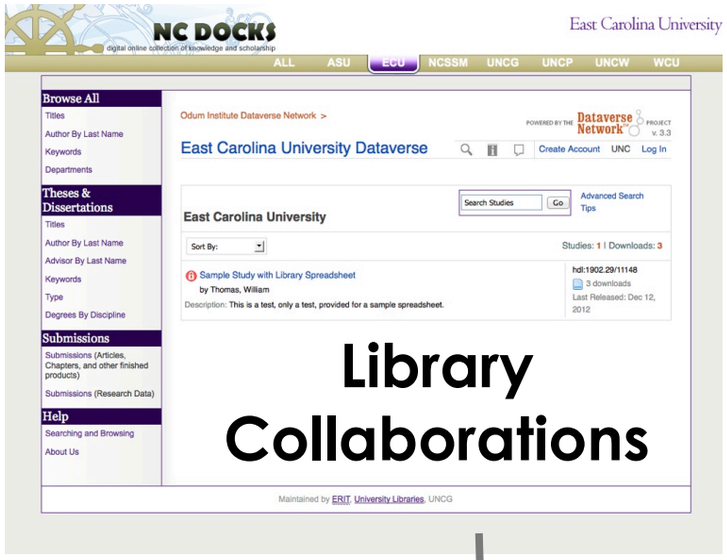
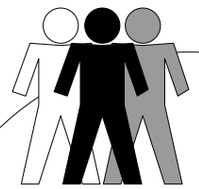
within this collection
Sort By:
Studies: 6 | Downloads: 6
OPPERA Baseline Profile of Mood States Bipolar (POMS), Case-Control Study of Chronic TMD
by Fillingim, Roger B.; Ohrbach, Richard; Greenspan, Joel D.; Knott, Charles; Dubner, Ronald; Bair, Eric; Baraian, Cristina; Slade, Gary D.; Maixner, William
Description: This instrument consists of 72 mood-related items, and participants indicate the extent to which each item describes their mood state over the past week, including today using a 4-category scale (much unlike this, slightly unlike this, sli...Continue [+]
hdl:1902.29/11183
0 downloads + analyses
Last Released: Feb 25, 2013
OPPERA Baseline Short Form 12 Version 2 (SF-12 v2), Case-Control Study of Chronic TMD
by Fillingim, Roger B.; Ohrbach, Richard; Greenspan, Joel D.; Knott, Charles; Dubner, Ronald; Bair, Eric; Baraian, Cristina; Slade, Gary D.; Maixner, William
Description: The SF-12 is a briefer measure of healthrelated quality of life derived by using 12 items from the original SF-36 instrument. The SF-12 yields 2 scale scores, A Mental Health Composite Score (MCS) and a Physical Health Composite Score (PCS...Continue [+]
hdl:1902.29/11185
0 downloads + analyses
Last Released: Feb 25, 2013
OPPERA Baseline Kohn Reactivity Scale (KOHN), Case-Control Study of Chronic TMD
by Fillingim, Roger B.; Ohrbach, Richard; Greenspan, Joel D.; Knott, Charles; Dubner, Ronald; Bair, Eric; Baraian, Cristina; Slade, Gary D.; Maixner, William
Description: This instrument consists of 24 items that assess an individual's level of reactivity or central nervous system arousability. Individuals respond to each item on a 5-category scale ranging from "disagree strongly" to "agree strongly." T...Continue [+]
hdl:1902.29/11176
2 downloads + analyses
Last Released: Feb 25, 2013
OPPERA Pennebaker Inventory of Limbic Languidness (PILL), Case-Control Study of Chronic TMD
by Fillingim, Roger B.; Ohrback, Richard; Greenspan, Joel D.; Knott, Charles; Dubner, Ronald; Bair, Eric; Baraian, Cristina; Slade, Gary D.; Maixner, Willaim
hdl:1902.29/11166
2 downloads + analyses
Last Released: Feb 15, 2013



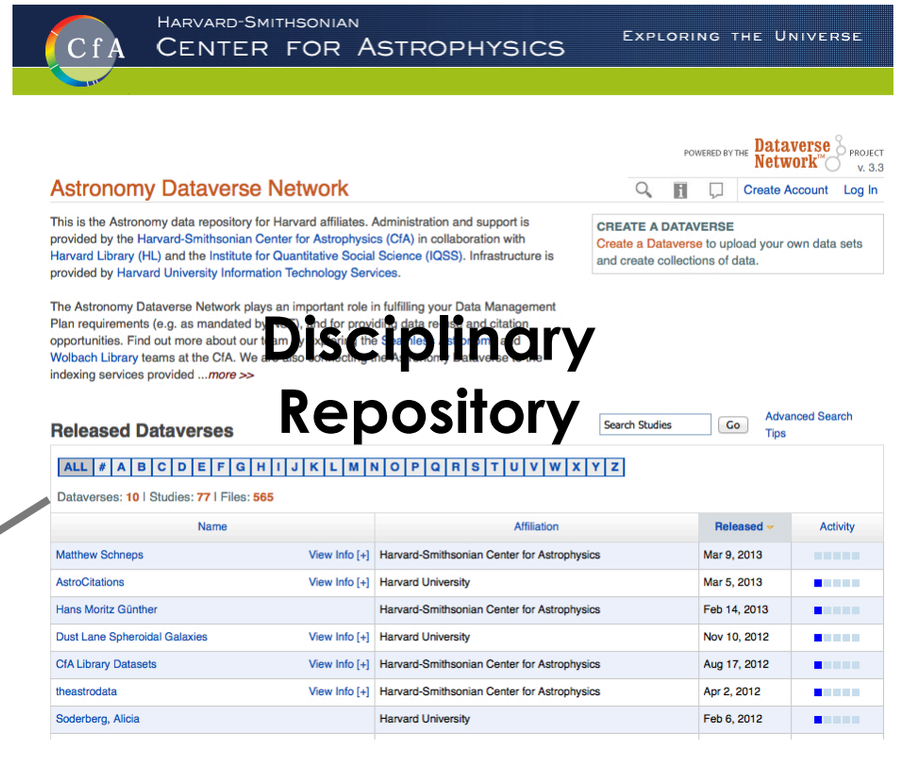
Library Collaborations

Research Collaborations

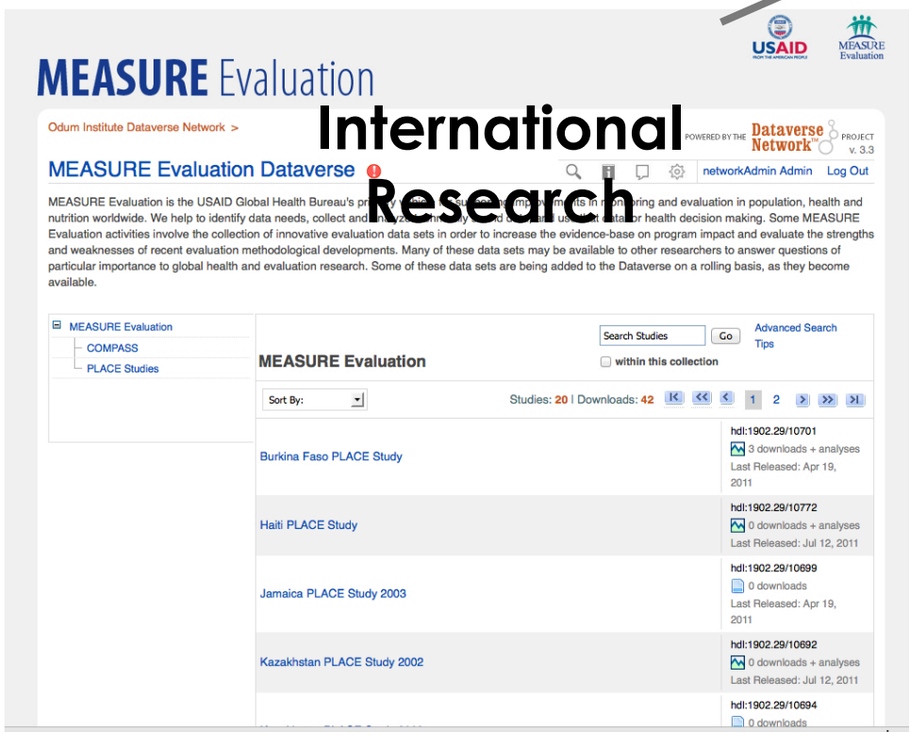


The Dataverse Network™ Project

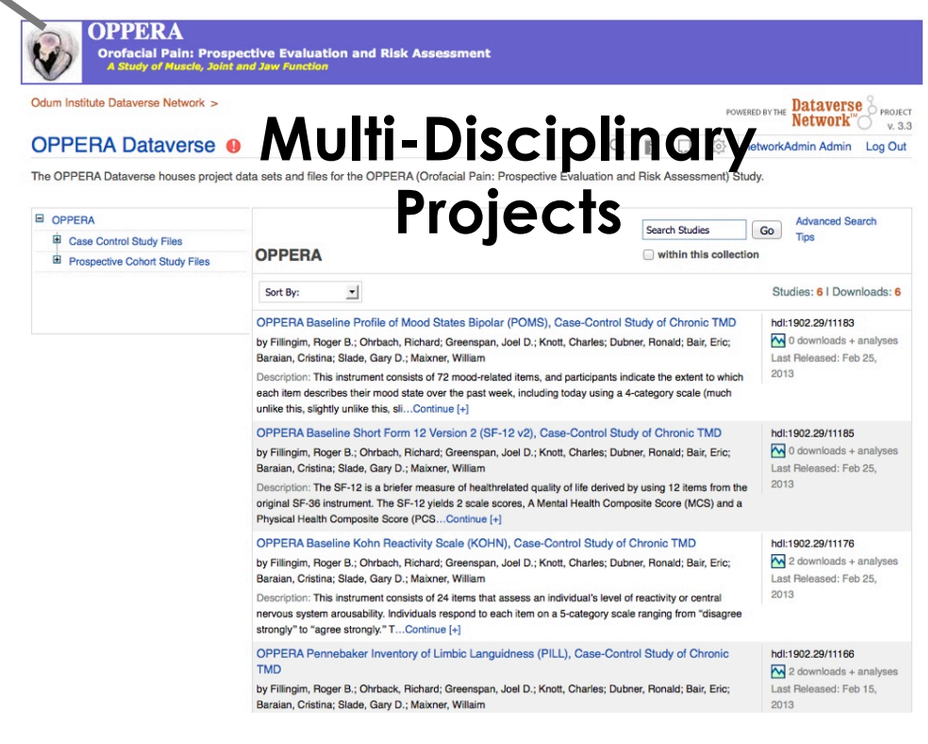
(Multi-Disciplinary Effort)



Disciplinary Repository



International Research



Multi-Disciplinary Projects

Why Dataverse?

Online Analysis

Discoverability

Ingest Tools

Distributed Preservation

Enable Data Sharing

Data Curation

Preservation Auditing

Standardization

Next Steps

Integration with CyberInfrastructure

eirods-consortium.org

DFC DataNet FEDERATION CONSORTIUM

NSF

Big Data: DataBridge

A Sociometric System for Long-Tail Science Data Collections

Secure Data Management and Auditing

Auditing Data Management Plans

SafeArchive

DMPTool
Guidance and Resources for your Data Management Plan

Secure Data Management and Delivery

Synthetic data

i·R·O·D·S

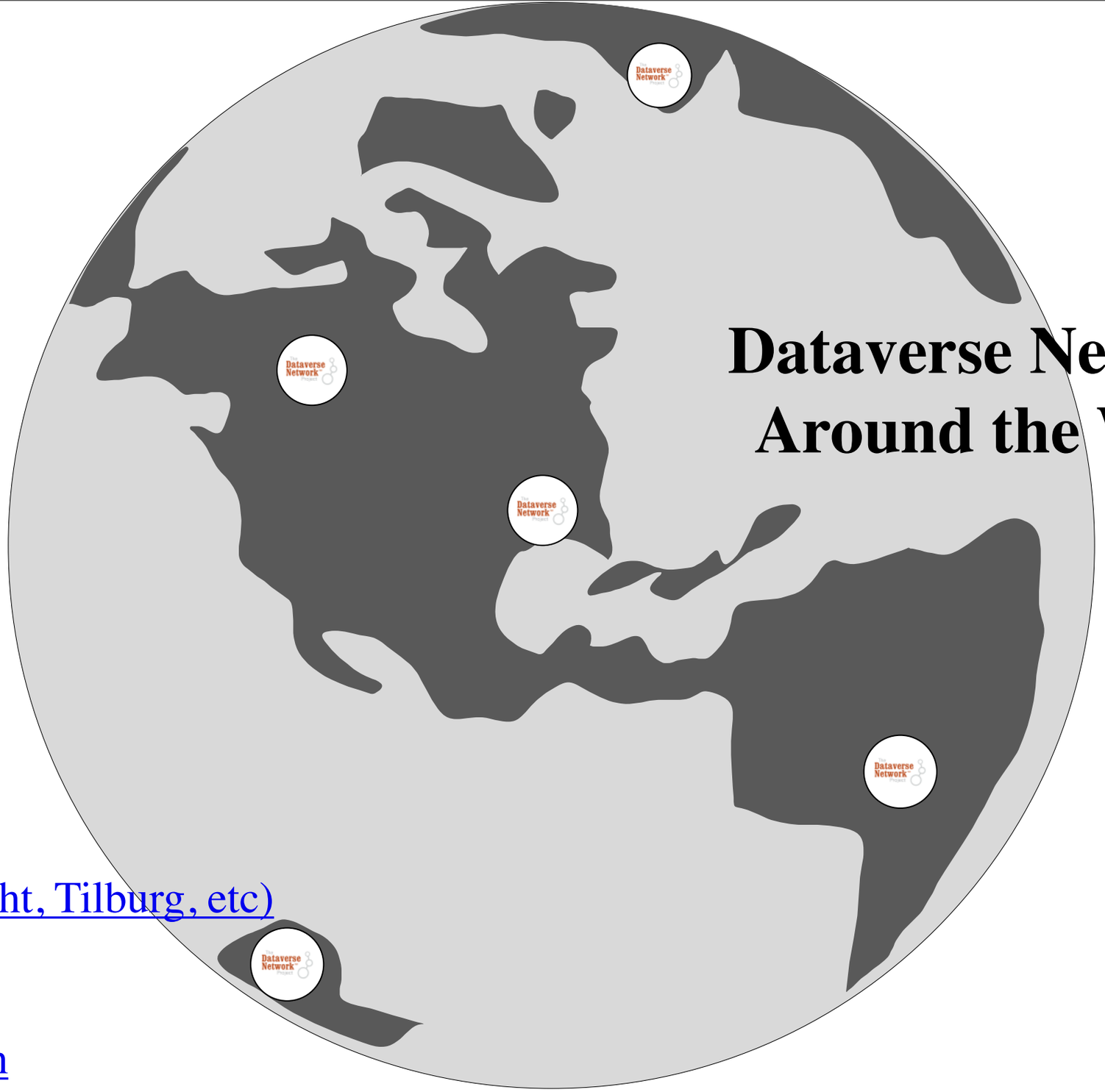
Differential privacy

Dataverse Networks at Harvard (collaboration between IQSS, Harvard Library and University IT):

- IQSS Dataverse Network:
- Astronomy Dataverse Network:

Dataverse Networks at UNC Chapel Hill:

- Odum Institute Dataverse Network:
- NC DOCKS Dataverse
- SURA Pilot Project Dataverse



Dataverse Networks Around the World

- Odum Institute
- Dutch Universities (Utrecht, Tilburg, etc)
- UC Davis
- UC San Diego
- University of Copenhagen
- Department of Cross Cultural and Regional Studies, University of Copenhagen
- European Union Democracy Observatory (Beta version)
- Ontario Council of University Libraries
- Thailand

DATA MANAGEMENT CHALLENGES

- Funding agencies and journal publishers are placing additional demands on researchers for data sharing and access
- Data-intensive science has enabled collaborative research that crosses disciplinary and institutional boundaries
- Researchers do not have access to or are unaware of tools and services to help manage their data
- Discipline specific customization to tools

Thank You

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http://thedata.org

http://www.odum.unc.edu