
Sharing
With
Dataverse
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The
Dataverse
Project

IQSS Data Science Team

The Institute for Quantiative Social Science


Researchers



Statistical Innovation


Data Science Applications and Tools

Data Curation & Stewardship

Information Scientists

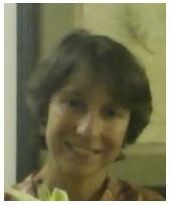
Tool Building & Computer Science


Software Engineers







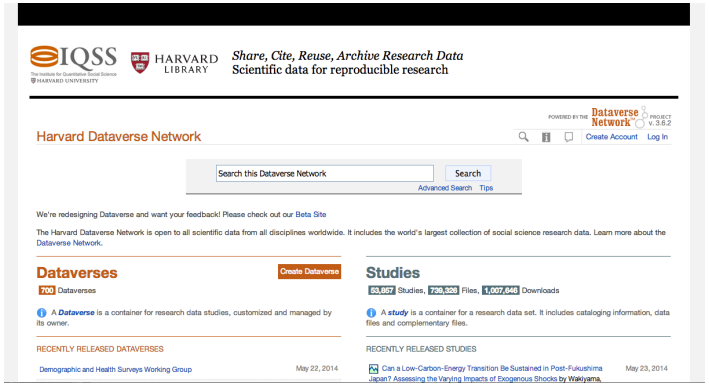
Find out more: http://datascience.iq.harvard.edu

Introduction to Dataverse

Software framework for publishing, citing and preserving research data
(open source on github for others to install)

Provides incentives for researchers to share:

- Recognition & credit via **data citations**
- Control over data & branding
- Fulfill journal data availability and funder requirements.



Harvard Dataverse (**open to all; general community** repository instance):

808 Dataverses

55,058 Datasets

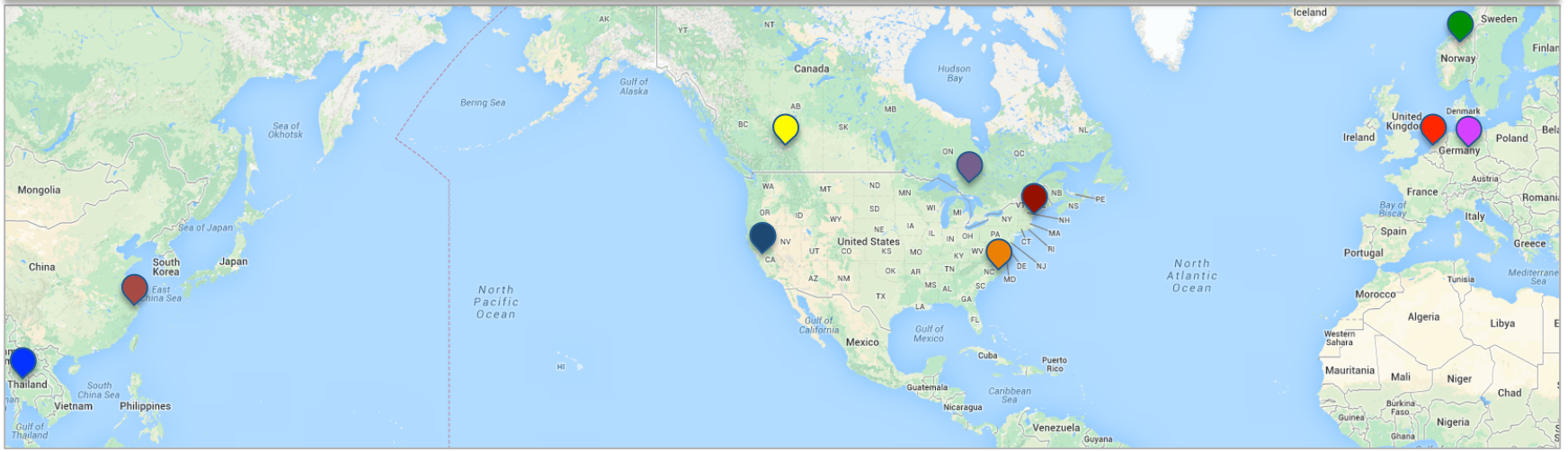
750,850 Files

> 1 Million Downloads

The Dataverse Project

Who Uses Dataverse ?

Worldwide Dataverse Installations



Institutions can setup/host their own Dataverse installation (UNC ODUM, Fudan Univ, Scholars Portal, DANS, etc) and within them can have dataverses for a variety of users (across all research domains): Researchers, Projects, Journals, etc.

Dataverse Best Practices (1)

- Standard Metadata Schemas
  - DDI, FGDC & OAI DC
  - Coming in 4.0: DataCite 3.1, ISA-Tab (biomedical), and VO Resource (astronomy)
- Formal Data Citation (Altman & King, 2007)
  - Endorsed + comply w/ Joint Declaration of Data Citation Principles (FORCE11)
- Persistent IDs: Handles & DOI (DataCite/EZID)

Dataverse Best Practices (2)

- File Fixity:
  - UNF for tabular data
  - MD5 checksums for other files
- Open Data (+ metadata) Licenses (CC0)
- **OAI-PMH**: harvesting metadata (DC, …)
- LOCKSS (replication of files)

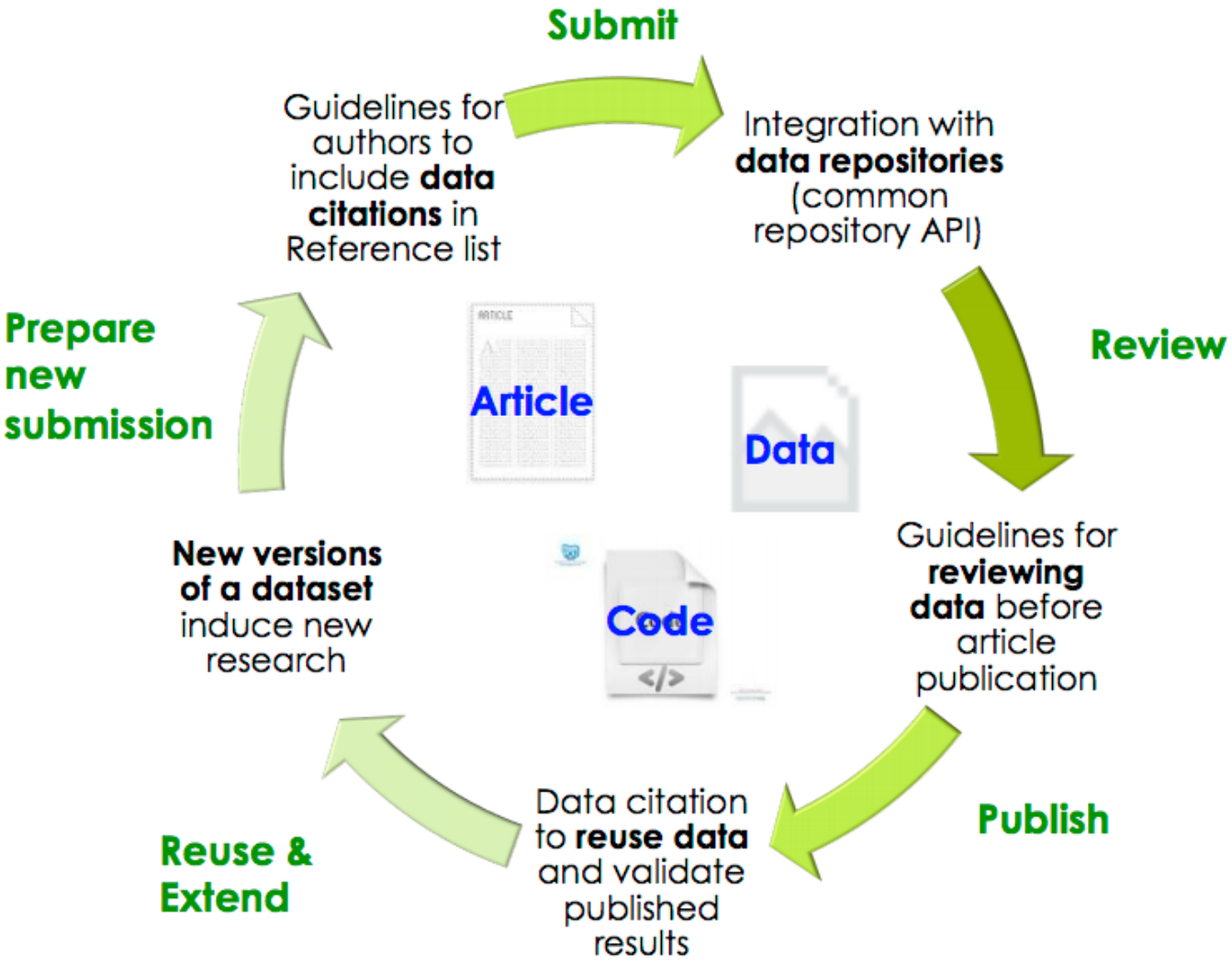
  → Data-PASS: (ICPSR, ODUM, NARA, ROPER,…)

SafeArchive

Data-PASS DATA PRESERVATION ALLIANCE for the SOCIAL SCIENCES

LOCKSS

Towards An Integrated Publishing Workflow



API Integration with Dataverse

Data Deposit API (metadata + data w/ SWORDv2)

For depositing datasets into Dataverse via API

See: OJS-Dataverse Journal Integration Project
http://projects.iq.harvard.edu/ojs-dvn/home

Also: dvn R Package, **OSF** Dataverse Add-on, etc

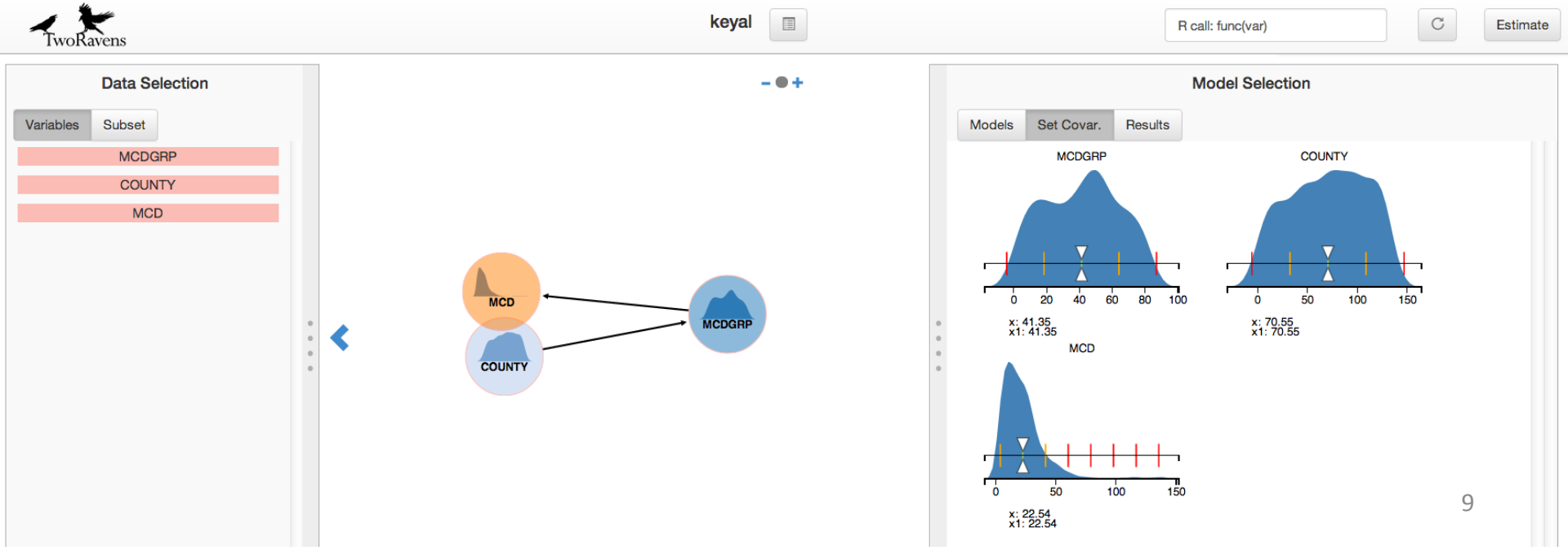
Data Sharing API

For searching/downloading Dataverse datasets (metadata + data) via API.

See: Thomas Leeper's dvn R package

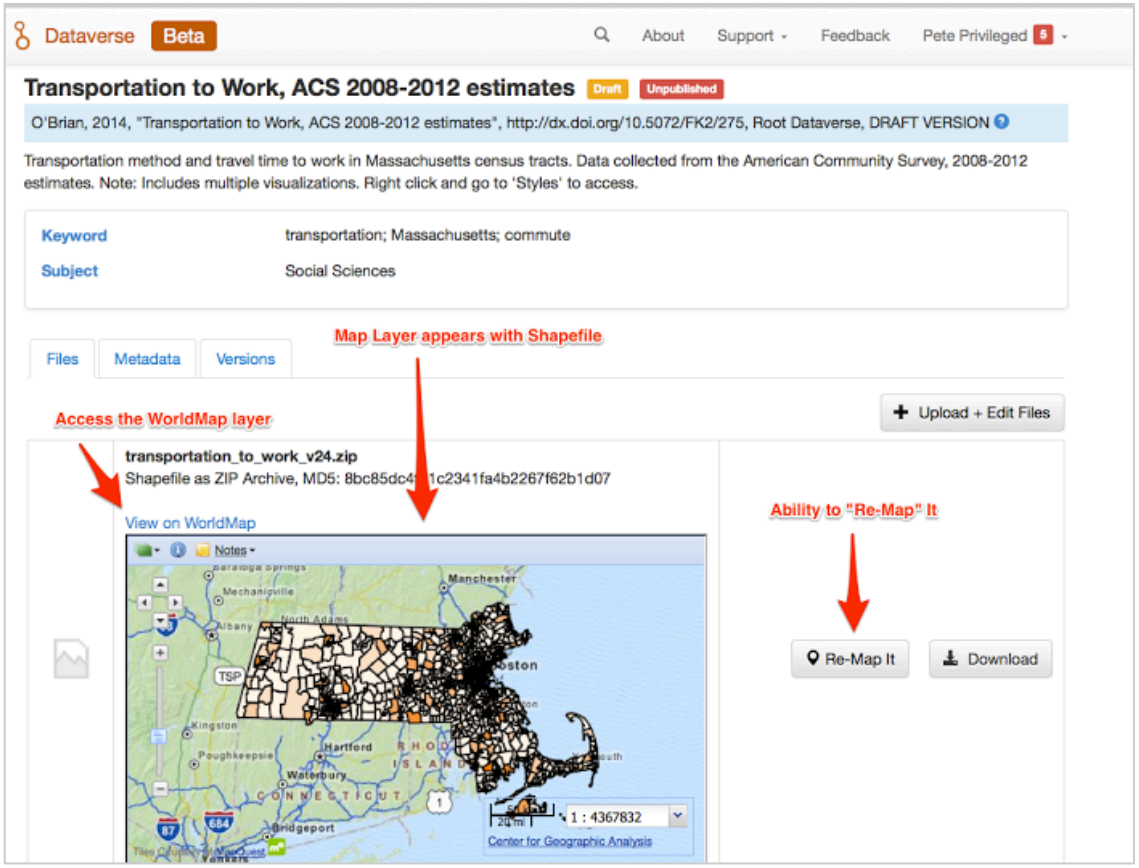
Visualize & Analyze Data: TwoRavens

- With Dataverse 4.0: for Tabular Data (i.e., R, csv, SPSS, …)
- From beginners up to advanced stats users
- Explore data, view descriptive statistics, and estimate statistical models for files in datasets



WorldMap Integration

1. Upload a shape file containing geographic data into Dataverse
2. WorldMap layer embedded into dataset in Dataverse
3. Easily visualize the data on the WorldMap system.



Read more on: Data Science Blog.

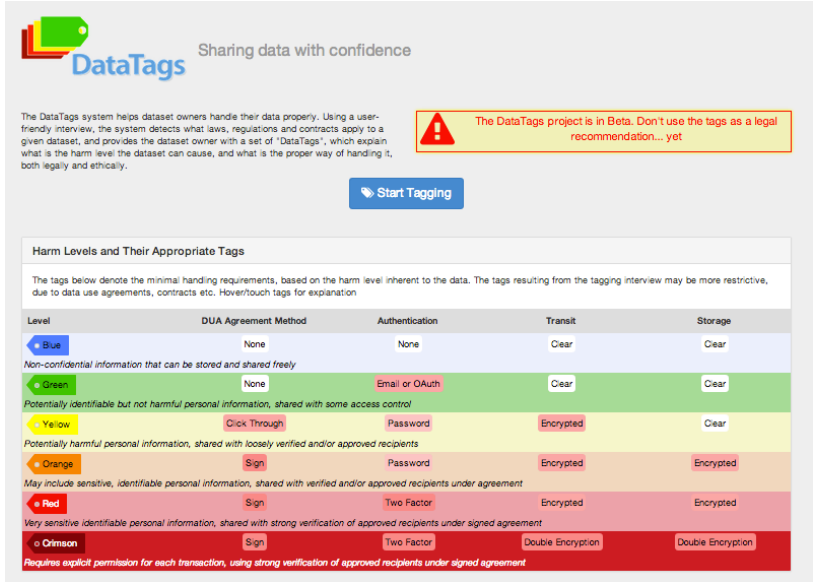
CENTER FOR GEOGRAPHIC ANALYSIS
HARVARD UNIVERSITY

Boston Area Research Initiative

Future Dataverse Collaborations

Sharing Privacy Sensitive Data

- Secure Dataverse
- **DataTags** (questionnaires based on privacy laws)



Longer-Term

- Data Citation Provenance Registry (NSF funder w/ SEAS)
- Large-scale datasets (efficient storage) → iRods
- Integrate w/ more Publishing Systems (new Sloan grant!)
- Author Disambiguation: ORCID Integration (API)
- Long-term preservation for more file formats (Archivematica)

Thank you!

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