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Introduction to Dataverse

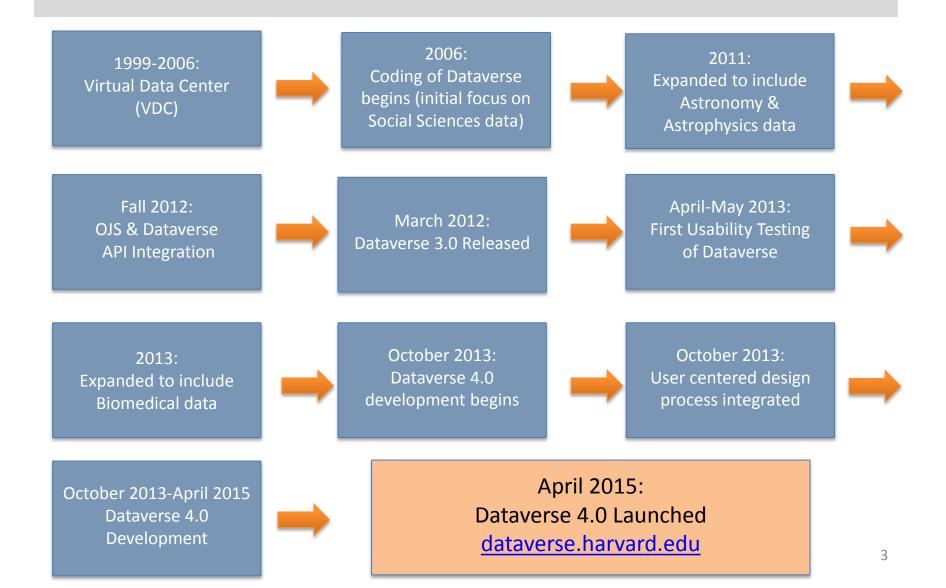
Software framework for publishing, citing and preserving research data (open source on <u>github</u> for others to install)

Developed by the Institute for Quantitative Social Science at Harvard University.

Provides incentives for researchers to share:

- Recognition & credit via data citations
- Control over data & branding
- Fulfill Data Management Plan requirements
- Default CC0 Waiver for all uploaded datasets

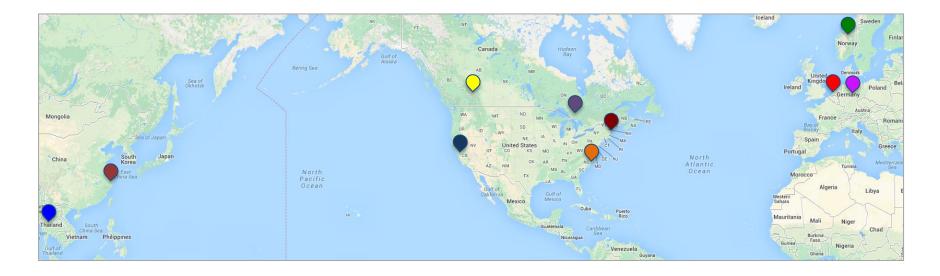
Dataverse Milestones



Who uses Dataverse?

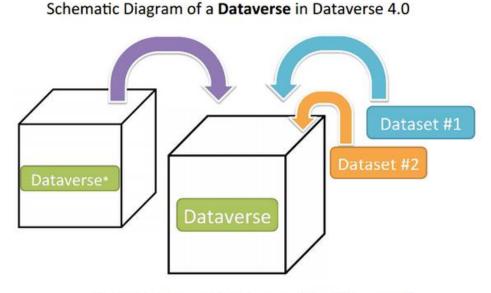
- Researchers
- Librarians
- Data Archivists
- Journals
- Courses
- Institutions and Organizations

Dataverse Around the World



Institutions can setup/host their own Dataverse repository (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.

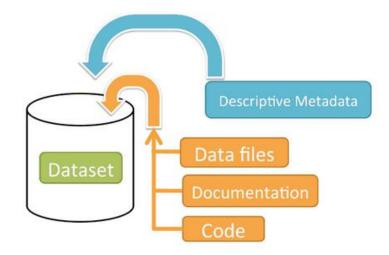
What is a Dataverse or Dataset?



Container for your Datasets and/or Dataverses*

* Dataverses can now contain other Dataverses (this replaces Collections & Subnetworks)

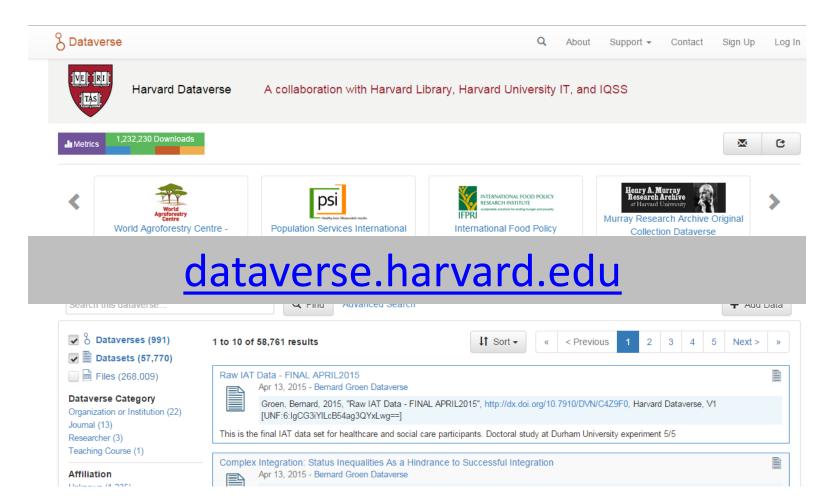
Schematic Diagram of a Dataset in Dataverse 4.0



Container for your data, documentation, and code.

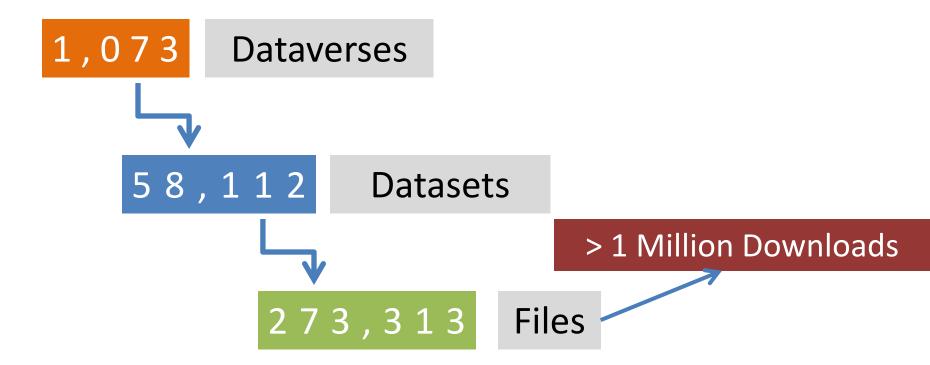
Harvard Dataverse

• Dataverse installation run at Harvard University



Harvard Dataverse

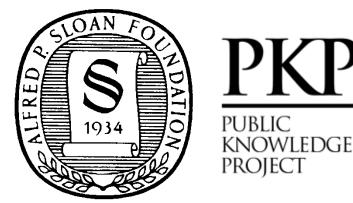
Open to all repository instance at Harvard currently has:



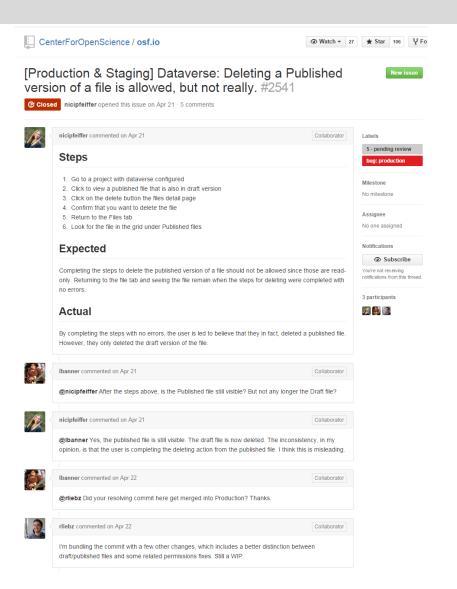
*number from June 2, 2015

Dataverse + OSF

- OSF Add-on uses Dataverse SWORD API for Data Deposit
 - <u>SWORD API guide</u>
 - projects.iq.harvard.edu/ojs-dvn/home
- June 9th: Common Models and APIs for Data Publishing and Citation in Cambridge, MA



Dataverse + OSF



Dataverse + OSF

 Researcher working in OSF decides to use the Dataverse add on

• Work in OSF with ability to publish datasets in Dataverse without having to leave OSF

Increases data discoverability for a researcher's dataset



DATAVERSE BEST PRACTICES

Dataverse Best Practices (1)

- Standard Metadata Schemas
 - DDI & OAI DC
 - New in 4.0:
 - DataCite 3.1
 - ISA-Tab (biomedical)
 - VO Resource (astronomy)
 - DC Terms

- Metadata can be exported in JSON & XML

Dataverse Best Practices (2)

 Metadata is always public once a dataset is published

• By default, datasets receive CC0 Waiver



 Even though default is CCO and we encourage open/public data, when needed, data files in a dataset can be made restricted, or terms of use can be added

Dataverse Best Practices (3)

- Formal Data Citation
 - Originally based off Altman + King 2007
 - Endorse + comply w/ 2014 Joint Declaration of Data Citation Principles (FORCE11)
 - Lead by Merce Crosas, Director of Data Science @ IQSS
 - Versioning and File Fixity
- Persistent IDs: DOI (DataCite/EZID)
 - Resolve to a dataset landing page, not directly to the data files

Data Citation Example

Principle 2: Credit and Attribution (e.g. authors, repositories or other distributors and contributors) Principle 4: Unique Identifier (e.g. DOI, Handle.). Principle 5, 6 Access, Persistence: A persistent identifier that provides access and metadata

Author(s), Year, Dataset Title, Data Repository or Archive, Version, Global Persistent Identifier

Principle 7: Specificity and verification

(e.g. the specific version used).

Versioning or timeslice information should be supplied with any updated or dynamic dataset.

Dataverse Best Practices (4)

- Preservation format conversion for tabular data (extract column/variable metadata)
- File Fixity:
 - -UNF (Altman, 2008) for tabular data
 - –MD5 checksums for other files

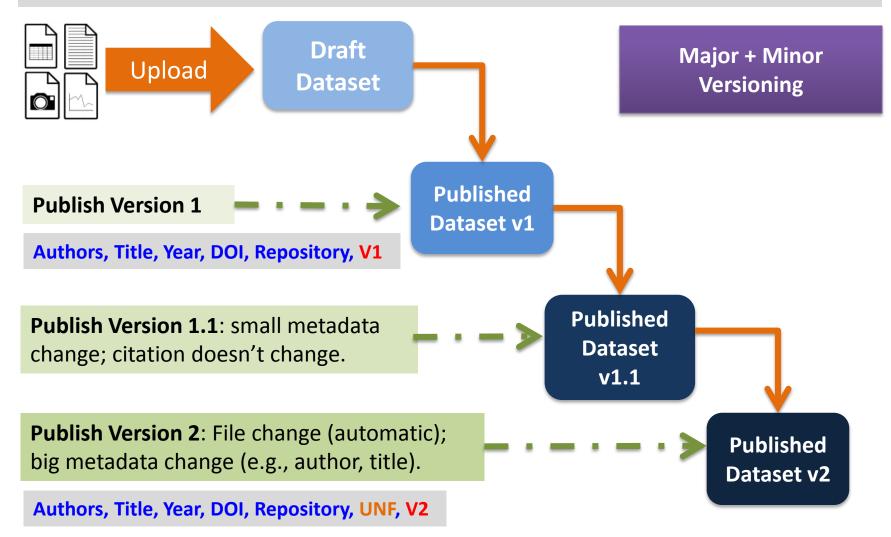
Dataverse Best Practices (5)

- Data-PASS: (ICPSR, ODUM, NARA, ROPER,...)
 Member of Data-PASS
- OAI-PMH: Harvesting metadata (DC, DDI)
 From other Dataverse installations
 From other OAI-DC compliant repositories
- If necessary: Deaccession a Dataset



PUBLISHING WITH DATAVERSE

Rigorous Data Publishing Workflows



Publishing a Dataset

Dataverse For tes	ting only	Q About Support - Contact Elizabe	eth Quigley 2
TCDL Demo Datav	erse (Harvard University)		
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Data Science at The Institute for Quantitative and Social Science | Dataverse Project on 😏 | Code available at 🕊 Copyright © 2015, The President & Fellows of Harvard College | Privacy Policy

Publishing Dataverse + Dataset

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Want to learn more?

Friday at 1:15pm in Blegen Hall 155

Dataverse, a repository framework for all Panel Discussion on how Dataverse is used at different universities and institutions

Thank you!

Contact: equigley@iq.harvard.edu

Learn more: dataverse.org



References

Altman M. A Fingerprint Method for Verification of Scientific Data. In A Fingerprint Method for Verification of Scientific Data. Springer-Verlag; 2008.
Altman M, King G. A Proposed Standard for the Scholarly Citation of Quantitative Data. D-Lib Magazine [Internet]. 2007;13(3/4).