Building a Bridge Between Journal Articles & Research Data

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Motivation

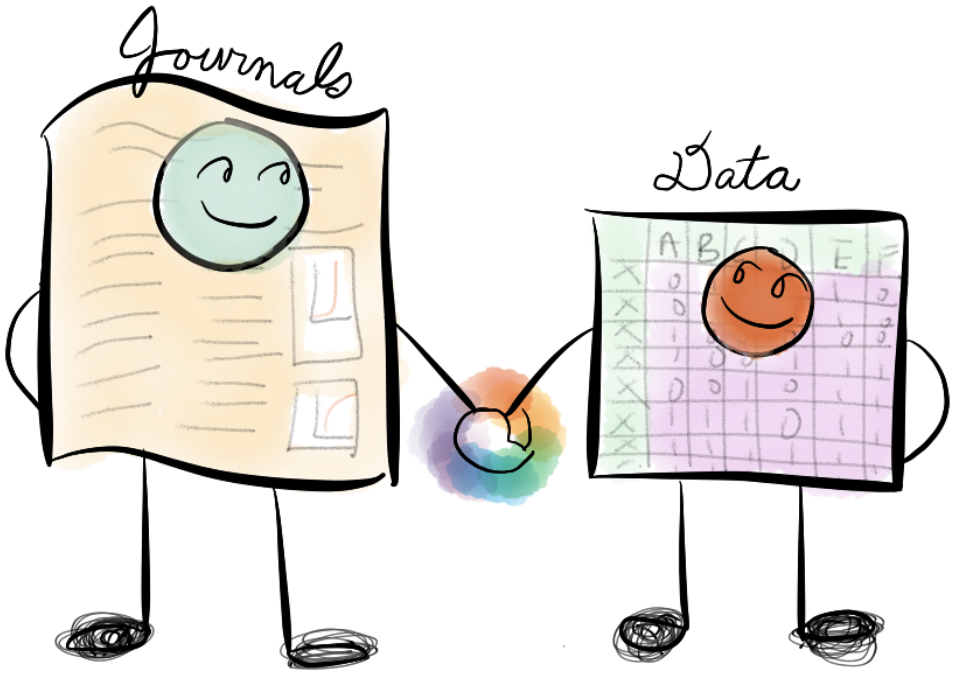

Photo: Jean Liu

Quotes for “Why?”

"The most immediate of these obstacles is the lack of a consolidated infrastructure for the easy sharing of data" - JORD Project results via EDaWaX blog

"Any moves towards data sharing are dependent upon the **cooperation of journals**.”* – Sergiu Ghergina and Dr. Alexia Katsanidou

*from European Political Science 2013: Data Availability In Political Science Journals

A team was assembled…

2 year Sloan Foundation grant (2012-2014):

Public Knowledge Project (PKP)

- Simon Fraser University
- Stanford University (John Willinsky)

Dataverse Network Project

- Harvard University's Institute for Quantitative Social Science (IQSS) (Gary King & Merce Crosas)
- Micah Altman – Director of Research at MIT

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The Dataverse Network™ Project

Project Proposal

Who?: Address the needs of **journals** in addition to researchers and data managers.

What?: Enable journals to seamlessly manage the submission, review, and publication of data associated with published articles.

How?: Build the needed **technology** and create **awareness / incentives** regarding the importance of data sharing and preservation.

Why?: Help **increase** the **replicability** and **reusability** of research data.

Integrating Open Source Systems

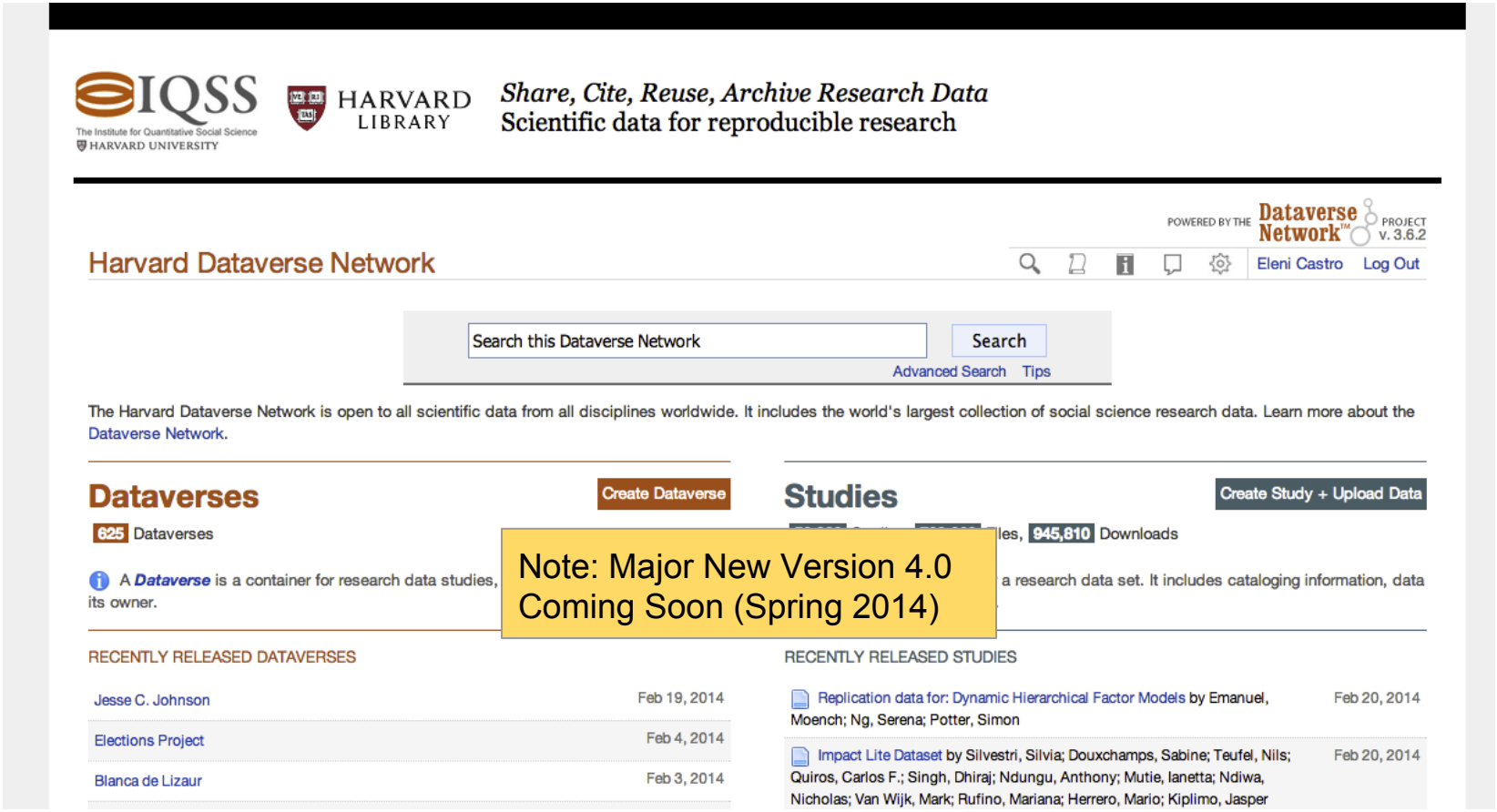
We plan to do this by integrating two well-established open-source systems:

1. Open Journal Systems (OJS)
   [Willinsky 2005]

2. Dataverse Network
   [King 2007; Crosas 2011]

Dataverse Network

The Dataverse Network Project



A repository for research data that takes care of **long term preservation** and **good archival practices**, while researchers can **share**, **keep control of** and get **recognition** for their data.

Dataverse provides…

- ✓ Option for backups and replication of data in different locations (LOCKSS) so data is never lost.
- ✓ Re-format for long term accessibility so data never become obsolete.
- ✓ Extract Variable, Header (FITS) Metadata from datasets.
- ✓ Universal Metadata standards (DDI, DC, DataCite).
- ✓ Interoperability with other systems through standard protocols (such as OAI-PMH, APIs).
- ✓ Generates a DOI for permanent linking to datasets.

The Dataverse takes care of the archival infrastructure ("plumbing") for you!

The Dataverse Network™ Project

Open Journal Systems (OJS)

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Open source journal management and publishing system created by PKP to expand & improve access to research.

Open Journal Systems (OJS)

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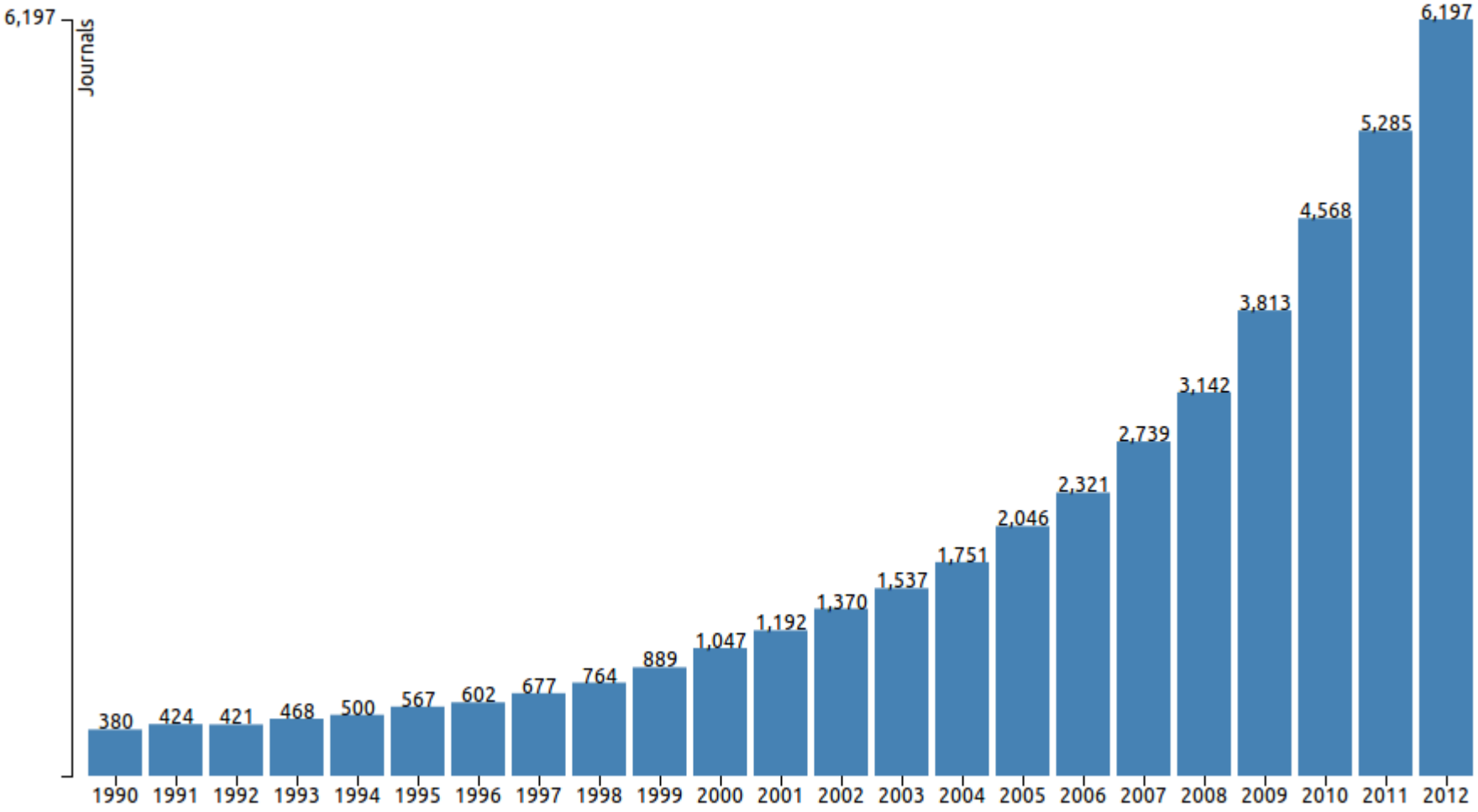

Journals using OJS to publish >=10 articles per year. Credit: Juan Alperin, PKP

OJS provides…

- ✓ Technical infrastructure for an entire editorial management workflow (submission, peer review, indexing).
- ✓ ‘Plugin' architecture (a la WordPress, Drupal, etc) to easily add new features without the need to change the entire core code base.
- ✓ Universal Metadata standards (expandable Dublin Core).
- ✓ Interoperability with other systems through standard protocols (such as OAI-PMH, APIs).
- ✓ Option for backups and replication of journals in different locations (LOCKSS) so access is never lost.

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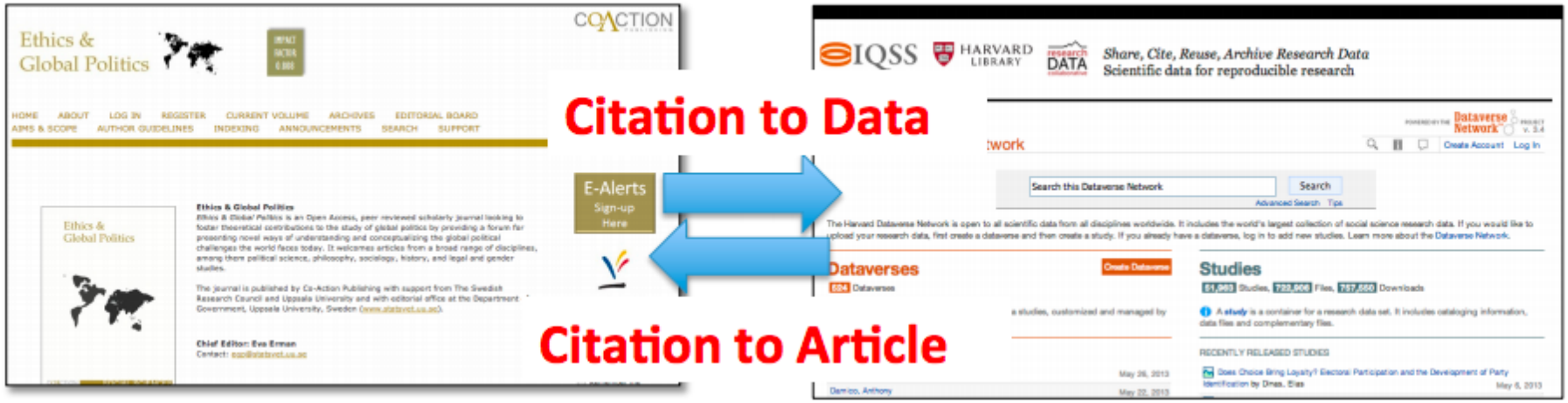
OK, so what is the integration going to do?

OJS Journal

Harvard Dataverse



OJS plugin for:
Data + supporting files + metadata
sent via API (SWORD-based)
to Dataverse

Which Workflow?

Slide acknowledgement: Merce Crosas

Progress to-date

1. Compiled a list of potential journals (~100) that we can work with.
2. Publishers reviewed our plugin workflow and mockups pre-development.
3. Completed and released first version of plugin+API.
4. Small sample of journals tested + provided feedback of integration via survey.
5. Some of our partners have begun production testing.
6. Working on improvements to UI and metadata customization for v2 release

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COACTION PUBLISHING

UNM UNIVERSITY LIBRARIES

International Journal of Education Policy & Leadership

ubiquity press
open scholarship

Demo

http://lib-hf1.lib.sfu.ca/ojs-2.4.3

Survey Findings

- ➔ Overall **positive**: Most testers plan to implement plugin!
- ➔ OJS doesn't have the most eye-catching UI. Dataverse link & data citation must be prominent.
- ➔ But users excited for an **OJS 3 + Dataverse 4 overhaul**!
- ➔ Default dcTerms metadata defined in the SWORD spec is too limited for all of our users; the ability to customize fields is important.
- ➔ Plugin should not treat all supplemental files as Dataverse-worthy (e.g., authors' notes).

Photo: Flickr Commons

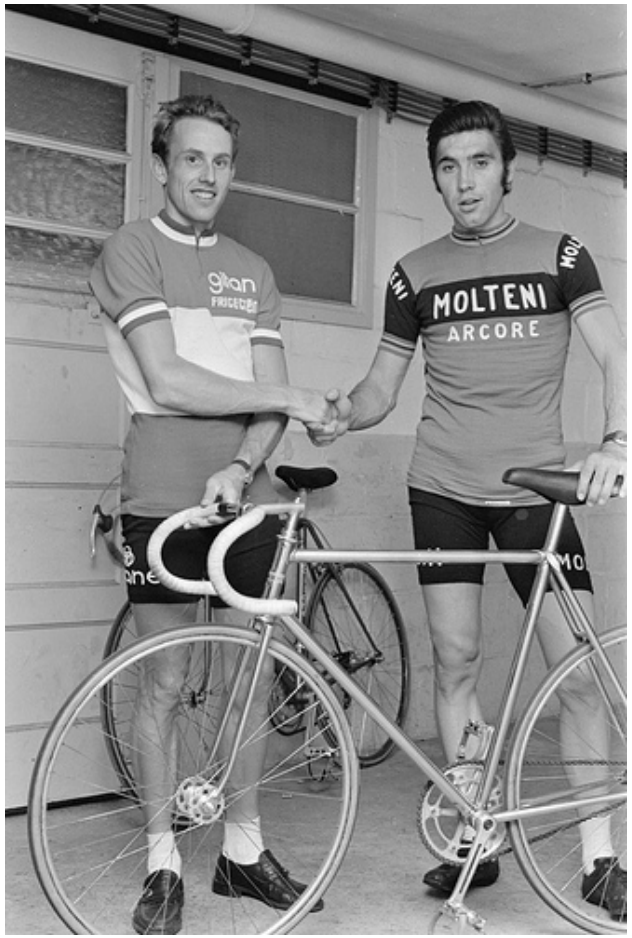
Next Steps (Spring 2014)

1. Publish best practices for data sharing policies.
2. Develop & release updated versions of plugin + Data Deposit API.
3. Continue to release all code and documentation :)
4. Expand on Collaboration.

Photo: Flickr Commons

Advantages to Integration

- ➔ Reference implementation so others can reuse and extend (extension of SWORD).
- ➔ Streamlining **authors**' article and data deposit process.
- ➔ Permanent **2-way linking** of the published article with its archived data.
- ➔ Increase **visibility/access**, and encourage data citation, replication and re-use.



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Thank you!

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Project Website

http://projects.iq.harvard.edu/ojs-dvn

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