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@OSFramework
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Expanding Public Access to the Results of Federally Funded Research

FEBRUARY 23, 2013 AT 12:04 PM ET BY MICHAEL STEBBINS

Summary: The Obama Administration is committed to making the results of research their tax dollars fund freely available to the public—generally within one year of publication.

The Obama Administration is committed to making the results of scientific research their tax dollars fund freely available to the public. OSTP Director John Holdren has announced the plan to increase federal R&D expenditures to develop plans to make research results publicly available—generally within one year of publication.

OSTP has been working on the proposal for two years. The final policy reflects substantial inputs from many in the scientific community, including members of Congress, and other members of the public who signed a We the People petition asking for increased access to funded research.

To see the new policy memorandum, please visit: http://www.whitehouse.gov/sites/default/files/final_policy_memorandum.pdf

To see Dr. Holdren’s response to the We the People petition, please visit: https://petitions.whitehouse.gov/research

Michael Stebbins is Assistant Director for Science and Technology Policy at the White House Office of Science and Technology Policy.

The European Commission has said that making the research it funds widely available is one of its priorities; its proposal for the rules of participation and dissemination in Horizon 2020 says that the program will have "dedicated support to dissemination (including through open access to research results), communication and dialogue actions" and that "open access shall apply under the terms and conditions laid down in the grant agreement." Last week, the commission's director-general of research and innovation at the commission, Robert-Jan Smits, said in an interview in the Times Higher Education that open access, which typically involves making research papers freely available within months or a year of publication, "will be the norm" for research funded through Horizon 2020. "With our €80 billion we can make one hell of a difference," Smits said.

What that will mean exactly is still unclear, however, and the topic of much lobbying and speculation. OA advocates say a clear mandate to make all EU-funded papers publicly available would be hugely significant, and would be another step in what they hope is a complete transition to OA. "We very much welcome" Smits's comments, says Alma Swan, Director of European Advocacy of SPARC, an international alliance of academic and research libraries promoting open access.

As negotiations proceed to shape the next installment of Europe's gargantuan research funding programs, scientists, librarians, and publishers are eagerly awaiting the answer to a critical question: How strong will the new 7-year program, called Horizon 2020, be on Open Access (OA)?
Open Access

Open Data

Open Workflows
Open Workflows

Open Data

Open Access
<table>
<thead>
<tr>
<th>Norms</th>
<th>Counternorms</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Communality</strong></td>
<td><strong>Secrecy</strong></td>
</tr>
<tr>
<td>Open sharing</td>
<td>Closed</td>
</tr>
<tr>
<td><strong>Universalism</strong></td>
<td><strong>Particularlism</strong></td>
</tr>
<tr>
<td>Evaluate research on own merit</td>
<td>Evaluate research by reputation</td>
</tr>
<tr>
<td><strong>Disinterestedness</strong></td>
<td><strong>Self-interestedness</strong></td>
</tr>
<tr>
<td>Motivated by knowledge and discovery</td>
<td>Treat science as a competition</td>
</tr>
<tr>
<td><strong>Organized skepticism</strong></td>
<td><strong>Organized dogmatism</strong></td>
</tr>
<tr>
<td>Consider all new evidence, even against one’s prior work</td>
<td>Invest career promoting one’s own theories, findings</td>
</tr>
<tr>
<td><strong>Quality</strong></td>
<td><strong>Quantity</strong></td>
</tr>
</tbody>
</table>
FIG. 3. Norm versus Counternorm Scores: Percent with Norm > Counternorm (dotted), Norm = Counternorm (striped), Norm < Counternorm (solid).
Incentives for individual success are focused on getting it published, not getting it right

Nosek, Spies, & Motyl, 2012
Problems

- Flexibility in analysis
- Selective reporting
- Ignoring nulls
- Lack of replication

Technology to *enable* change

Training to *enact* change

Incentives to *embrace* change
More than just data access, sharing, and compliance
Technology to *enable* change
OSF for Institutions

Joint development with:

UNIVERSITY OF NOTRE DAME
Hesburgh Libraries

UNIVERSITY OF NOTRE DAME
Center for Research Computing
Current OSF for Institutions BETA users

- University of Notre Dame
- USC University of Southern California
- University of California, Riverside

Will be added to BETA soon

- University of Virginia
- Universiteit Gent
- Busara Center

And interest from 50+ research universities and organizations
OSF for Institutions

Provide **visibility** for ongoing and unpublished research

**Insight** and data on research collaboration

Serve as a **commons** for interdisciplinary research

**Access** point to public and private **research workflows**

Evaluate **impact** of research investment beyond citations

**Connect** services and eliminate silos
Simplified scientific collaboration
Powerful end-to-end support for your research.

http://osf.io/
free, open source
Integrated authentication and affiliation

Example
http://osf.nd.edu/
Institutional landing pages

Workflow activity across all affiliated projects
Data for affiliated on-going public projects

Filtered search across affiliated projects
Institutional affiliation on project pages
Put data, materials, and code on the OSF

Check out “Fish Guy’s” Story: http://www.wired.com/2016/01/print-an-army-of-giant-articulated-fish-from-this-3-d-database/
Automate versioning with hashes.
Get a persistent identifier

https://osf.io/tvyxz/

Wiki

Openness is a core value of scientific practice. There is no central authority determining the validity of scientific claims. Accumulation of scientific knowledge proceeds via open communication with the community. Sharing evidence for scientific claims facilitates critique, extension, and application. Despite the importance of open communication for scientific progress, present norms do not provide strong incentives for individual researchers to share data, material...
Easy Collaboration control and granular permissions

<table>
<thead>
<tr>
<th>Name</th>
<th>Permissions</th>
<th>Bibliographic Contributor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ben B. Blohowiak</td>
<td>Read + Write</td>
<td>✓</td>
</tr>
<tr>
<td>Johanna Cohoon</td>
<td>Administrator</td>
<td>✓</td>
</tr>
<tr>
<td>Lee de-Wit</td>
<td>Read + Write</td>
<td>✓</td>
</tr>
<tr>
<td>Eric Eich</td>
<td>Read + Write</td>
<td>✓</td>
</tr>
<tr>
<td>Frank J. Farach</td>
<td>Read + Write</td>
<td>✓</td>
</tr>
<tr>
<td>Fred Hasselman</td>
<td>Read + Write</td>
<td>✓</td>
</tr>
<tr>
<td>Alex O. Holcombe</td>
<td>Read + Write</td>
<td>✓</td>
</tr>
<tr>
<td>Macartan Humphreys</td>
<td>Read + Write</td>
<td>✓</td>
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See the impact

File downloads
Other features of the OSF

Managing Projects
- Creating a Project
- Creating Components
- Adding Contributors
- Uploading files
- Logs
- Using the project organizer
- Bookmarks

Sharing Projects
- Privacy controls
- View-only links
- Applying a license
- Citations with persistent IDs
- Metrics
- Tags - files and projects

Collaborating
- Wikis
- Notifications
- Commenting
- Forking and Linking projects
- User profile data
- Forums (Coming Soon)

Connecting Add-ons
- Enabling Add-ons
- Box
- Dropbox
- Github
- Mendeley
- Zotero
- figshare
- Dataverse
- 19 more coming soon

Files and Version Control
- Drag and drop interface
- Revisions and versions
- Folders
- Download Counts
- File checkout

Registering Projects
- What are registrations
- Explanation of Registration Templates
- Embargoes
- DOIs/ARKs
- Retractions

Security and Privacy
- 2-factor authentication
- Backup scheme
- Security information (FAQs)
29 grants to develop open tools and services: [https://cos.io/pr/2015-09-24/](https://cos.io/pr/2015-09-24/)
Connecting the workflow is critical to enabling change
# OSF APIv2 Documentation

Welcome to the fine documentation for the Open Science Framework's API! Please click on the GET /v2/ link below to get started.

<table>
<thead>
<tr>
<th>Method</th>
<th>URI</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>GET</td>
<td>/v2/</td>
<td>Welcome to the V2 Open Science Framework API</td>
</tr>
<tr>
<td>GET</td>
<td>/v2/applications/</td>
<td>Get a list of API applications (eg OAuth2) that the user has registered</td>
</tr>
<tr>
<td>POST</td>
<td>/v2/applications/</td>
<td>Get a list of API applications (eg OAuth2) that the user has registered</td>
</tr>
<tr>
<td>GET</td>
<td>/v2/applications/{client_id}/</td>
<td>Get information about a specific API application (eg OAuth2) that the user has registered</td>
</tr>
<tr>
<td>PUT</td>
<td>/v2/applications/{client_id}/</td>
<td>Get information about a specific API application (eg OAuth2) that the user has registered</td>
</tr>
<tr>
<td>PATCH</td>
<td>/v2/applications/{client_id}/</td>
<td>Get information about a specific API application (eg OAuth2) that the user has registered</td>
</tr>
<tr>
<td>DELETE</td>
<td>/v2/applications/{client_id}/</td>
<td>Get information about a specific API application (eg OAuth2) that the user has registered</td>
</tr>
<tr>
<td>POST</td>
<td>/v2/applications/{client_id}/reset/</td>
<td>Resets client secret of a specific API application (eg OAuth2) that the user has registered</td>
</tr>
<tr>
<td>GET</td>
<td>/v2/nodes/</td>
<td>Nodes that represent projects and components</td>
</tr>
<tr>
<td>POST</td>
<td>/v2/nodes/</td>
<td>Nodes that represent projects and components</td>
</tr>
<tr>
<td>PUT</td>
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<td>Nodes that represent projects and components</td>
</tr>
<tr>
<td>GET</td>
<td>/v2/nodes/{node_id}/</td>
<td>Details about a given node (project or component)</td>
</tr>
<tr>
<td>PUT</td>
<td>/v2/nodes/{node_id}/</td>
<td>Details about a given node (project or component)</td>
</tr>
</tbody>
</table>

[API Docs](https://api.osf.io/v2/docs/)
Done: NDS OSF Dashboard integration

Next: IR connection to OSF

Find out more about these projects here [https://osf.io/s5e2b/](https://osf.io/s5e2b/)
iREDS Project: (Institutional Re-engineering Ethical Discourse in STEM) To evaluate an OSF-based training curriculum designed to promote ethical discourse in STEM labs

Research Design

- **Intervention**: OSF training & Ethics training
- **Assignment to Cells**: Randomized Control Trial
- **Population**: All 280 labs in UCR science college + biomedical sciences
- **Sampling**: 160 labs randomly selected, approx 1,000 lab personnel
- **Outcome Data**: Survey of ethical behaviors and attitudes; ethnography

<table>
<thead>
<tr>
<th>Ethics Training</th>
<th>OSF Training</th>
<th>Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>No</td>
<td>Control</td>
</tr>
<tr>
<td>Yes</td>
<td>No</td>
<td>OSF Only</td>
</tr>
<tr>
<td>Yes</td>
<td>Yes</td>
<td>Ethics Only</td>
</tr>
<tr>
<td>Yes</td>
<td>Yes</td>
<td>OSF + Ethics</td>
</tr>
</tbody>
</table>
Training to *enact* change
Free training on how to make research more reproducible

http://cos.io/stats_consulting
COS Statistical and Methodological Consulting / Online Materials

Contributors: Courtney Soderberg, Geneva T. Dodson

Date created: 2015-04-19 06:31 PM | Last Updated: 2016-01-24 11:25 PM

Category: Project  
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This project contains all the materials (slidedecks, code, examples, etc.) related to the materials posted on the Center for Open Science’s youtube channel. Below is an index of all the current material.

- Confidence Intervals
  - Intro to Calculating Confidence Intervals
  - Confidence Intervals for ANOVAs

- Power
  - Consequences of underpowered studies
  - Intro to Power in R
  - Repeated Measures ANOVA in G*Power...
Issues Arising from Underpowered Studies

Courtney Soderberg
Center for Open Science
Statistical and Methodological Consultant

Consequences of Low Statistical Power

Center for Open Science

203 views
Community includes Ambassadors
Community includes partners
Incentives to *embrace* change
Transparency and Openness Promotion (TOP) Guidelines

Low barrier to entry
Modular
Agnostic to discipline
TOP Guidelines
http://cos.io/top

1. Data citation
2. Design transparency
3. Research materials transparency
4. Data transparency
5. Analytic methods (code) transparency
6. Preregistration of studies
7. Preregistration of analysis plans
8. Replication
TOP Signatories

Journals, Organizations, Funders

Endorsement of principles + commitment to review for adoption

Over
538 journals +
58 orgs

cos.io/top
Signals: Making Behaviors Visible Promotes Adoption

https://osf.io/tvyxz/
Data Availability in *Psychological Science*
% of Articles reporting that data was available:

- 100%
- 75%
- 50%
- 25%
- 0%

Reportedly available: 45, 13, 27, 46
Available: 46, 42, 35
Correct Data: 38
Usable Data: 14, 9, 10, 6

Legend:
- Journals without Badges
- PSCI before Badges
- PSCI with Badges (Not Earned)
- PSCI with Badges (Earned)
The $1,000,000 Preregistration Challenge

Endorse TOP Guidelines
Badges for Open Practices
Registered Reports

https://cos.io/prereg/
What can you do?
1. Contact us about interest in using OSF for Institutions  matt.spitzer@cos.io
2. Connect your IR to OSF or use OSF as IR  http://osf.io/
3. Add your IR as a provider to SHARE  http://osf.io/share/
5. Schedule OSF-Reproducibility Workshops  https://cos.io/stats_consulting/
6. Your feedback on these efforts
7. Connect to relevant developer communities
Connect your services to make it *easier* to be more open and reproducible
Meet researchers where they are and help them find *immediate benefit* in training.
Partner with us to promote incentives that help realign values and practices
Find this presentation at [https://osf.io/6ewnr/](https://osf.io/6ewnr/)


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