

New Frontiers in Community-Led API Development

A Case Study on the OSF

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— CENTER FOR —
OPEN SCIENCE

Center for Open Science

COS Mission: to increase openness, integrity, and reproducibility of research



Policy
Incentives to
embrace change



Research
Evidence of
change



Infrastructure
Technology to
enable change



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Open Science Framework (OSF)

A free, open source online research platform, designed to support researchers to openly, and transparently share their work at all stages of the research lifecycle.



Projects

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Homophily and Acrophily as Drivers of Political Segregation

Contributors: Amit Goldenberg, Robb Willer, Joseph Abruzzo, Joseph Abruzzo, Eran Halperin
Date created: 2019-10-22 07:26 AM | Last Updated: 2022-06-09 01:25 PM
Category: Project

Description: Political segregation is a significant social problem, increasing polarization and impeding effective governance. Prior work views the central driver of segregation to be political homophily, the tendency to associate with others with similar political views. We propose that in addition to political homophily, people's social tie decisions are also driven by political acrophily, the tendency to associate with others with more extreme political views (rather than more moderate). We examine this idea using a paradigm in which participants share emotions and attitudes on political policies, observe others' responses, and choose which others to affiliate with. In four studies (N = 1235), we found that both liberal and conservative participants' decisions indicated a tendency for acrophily. We found that participants who viewed peers who expressed more extreme views as more prototypical of their political group also tended to acrophilize more. These studies identify a previously overlooked tendency in political tie formation.

Has supplemental materials for Homophily and Acrophily as Drivers of Political Segregation on OSF Preprints

Registrations

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Homophily and Acrophily as Drivers of Political Segregation

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AUTHOR AFFILIATIONS
Conflict of Interest: No Public Data: Available Preregistration: Available

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Abstract

Political segregation is a significant social problem, increasing polarization and impeding effective governance. Prior work views the central driver of segregation to be political homophily, the tendency to associate with others with similar political views (rather than more moderate). We examine this idea using a paradigm in which participants share emotions and attitudes on political policies, observe others' responses, and choose which others to affiliate with. In four studies (N = 1235), we found that both liberal and conservative participants' decisions indicated a tendency for acrophily. We found that participants who viewed peers who expressed more extreme views as more prototypical of their political group also tended to acrophilize more. These studies identify a previously overlooked tendency in political tie formation.

Supplemental Materials
osf.io/g49fq

Preprint DOI
10.31219/osf.io/9tewr

License
CC0 1.0 Universal

Disciplines

Wiki Citation

Files for Studies 1-3 are located here. Files for Study 4 (agent-based model) is located here: <https://osf.io/td7w/>

Files

Name	Modified
Homophily and Acrophily as Drivers of Political ...	
OSF Storage (United States)	
SM_Homophily+Acrophily.pdf	2021-07-13 12:30 PM
Study_2_files	
study_3_files	
study_4_files	
LAB STUDY-Homophily and Acrophily as Drivers of Political Segregation	
OSF Storage (United States)	
Study_1_files	

Components

LAB STUDY-Homophily and Acrophily as Drivers of Political Segregation
Goldenberg & Abruzzo

Recent Activity

- Amit Goldenberg added file study_4 in Homophily and Acrophily as Drivers of Political Segregation
- Amit Goldenberg added file study_4 in Homophily and Acrophily as Drivers of Political Segregation
- Amit Goldenberg created folder study_4 in Homophily and Acrophily as Drivers of Political Segregation
- Amit Goldenberg edited description in Homophily and Acrophily as Drivers of Political Segregation

OSF REGISTRIES Add New My Registrations Help Donate

Network Selection Based on Emotional Responses to Political Situations

Public registration Updates

Overview

Metadata Files Resources Wiki Components Links Analytics Comments

Open practice resources

- Data
- Analytic code
- Materials
- Papers
- Supplements

Summary

Provide a narrative summary of what is contained in this registration, or how it differs from prior registrations.

Network Selection Study

The goal of this project is to examine how people select their social network based on others' emotional responses to political situations. To achieve this goal, we developed a task designed to evaluate network selection strategies. During each trial in the task (20 trials in total):

- Participants see a picture in which the police is violently arresting a black woman or man with 20 different pictures). These pictures were piloted to elicit negative emotional responses, predominantly anger.
- Participants are asked to provide their emotional responses on a 1-8 scale, 1 indicating no negative emotions and 8 indicating very negative emotions.
- Participants are then asked to provide a written response to the picture using a text box.
- Following their own rating and text response, participants then see responses of 6 other participants to the same pictures (agent responses). The names are gender matched to participant own gender. The rating and text responses are similar in structure to the ones produced by participants. Participants are then asked to choose three agents they wish to eliminate and not see anymore. The 3 agents that are left will appear on the following trial with the same names.
- Agents' responses were collected in a previous study, 50% of the agents are conservatives and 50% are liberals.
- In the control condition, participants are asked to rate their emotional responses to the picture and to provide their text, however they are asked to randomly select the three users who appear on the screen in front.

We conducted a few pilot studies to examine both participants' emotional responses to the pictures as well as to get an initial overview on participants' behavior during the task. These studies and the literature on network selection have led us to develop a few hypotheses:

- Homophily Hypothesis: Generally speaking, participants will choose to keep agent who are more similar to them and to eliminate agents who are different from them.

Analysis to test for homophily, we plan to compare the difference between participants' ratings and the agents they keep to the difference between participants' ratings and the agents they eliminate. A second way in which we plan test homophily is to compare participants' text to the text of eliminated and kept agent. This would be done either by comparing the emotions expressed in these texts (using sentiment analysis), or by using other measures of textual similarity.

Contributors
Amit Goldenberg

Registration type
Open-Ended Registration

Date registered
October 22, 2019

Date created
October 22, 2019

Associated project
osf.io/g49fq

Internet Archive link
<https://archive.org/details/osf-registrations-xdng4-v1>

Category
Project

Registration DOI
<https://doi.org/10.17605/OSF.IO/XDNJ4>

Citation
osf.io/td7w

Preprints

Store Data

Collect Data

OSF: part of an integrated workflow



sandbox

Metadata

Files

Wiki

Analytics

Registrations

Contributors

Add-ons

Settings

Select Add-ons

Configure Add-ons

Citations

Storage



Bitbucket

Enable



Box

Disable



Dataverse

Enable



Dropbox

Enable



figshare

Enable



GitHub

Disable



GitLab

Enable

Configure Add-ons

BOX authorized by Gretchen Gueguen

Disconnect Account

Current Folder: /Fundamentals of Metadata Instructor Files

Change

GitHub authorized by Gretchen Gueguen

Disconnect Account

Current Repo:

gueguen/collectionBuilder

Save

Create Repo

Google Drive authorized by Gretchen Gueguen

Disconnect Account

Current Folder: Fundamentals of Digital Libraries Instructor Files

Change

Zotero authorized by Gretchen Gueguen

Disconnect Account

Current Library: Metadata Assessment

Change

Current Folder: None

Change

Background: NSF POSE Program

Supports the facilitation, creation and growth of open-source ecosystems for the creation of new technology solutions.

1. Catalyze community-driven development and growth of open scholarship practice.
2. Connect digital repositories, tools, and other services across the research lifecycle via the open-source OSF
3. Improve workflows that enable open scholarship across a range of research goals, methodologies, processes, and outputs.
4. Harness shared investment in public goods.



Phase II projects are for open-source research products with a small community of external users and external content developers.

Technical Development Roadmap

- **Initial phase (pre-grant):** design and develop a generic infrastructure/API for creating new OSF integrations.
- **Second phase:** Create and test documentation for new API and develop workflow for community governance, support and contribution.
- **Third phase:** Small awards to groups interested in developing an add-on to test using the new API and framework.
- **Fourth phase:** Open marketplace to create and find new add-ons for OSF.

Community Building Roadmap

- Reach out to existing | previous | potential developers to ascertain barriers to contribution through focus groups.
- Establish a framework for community contribution, governance, and support.
- Test framework through small awards for developers to test and create new add-ons.
- Build community based on this experience.

Project Outputs

- API for integrating addons w/ OSF
- Documentation and resources for working w/ OSF addon code
- Testing framework for integration code
- Webpage and community Slack
- Steering Committee
- Community Developer grantees
- Annual Hackathon
- Community of OSF developers

New Community-Developed Integrations w/ OSF



Photo by Cameron Barrago on Unsplash



Road Closed: OSF Add-on infrastructure



Each integration built individually: complex, not enough support/documentation

Various interactions for authentication process/various types of credentials

- OAUTH
- Access / Secret Key
- Username / Password
- Access token

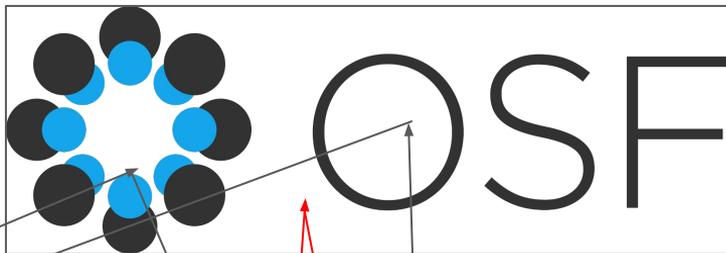
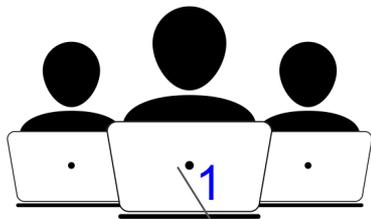
Basic file management / CRUD functions vary by service

- View files
- add/update files
- Delete files
- Log changes to files in OSF
- Versioning support

Internal OSF storage handled differently

- More robust versioning
- Storage limits
- Download stats
- Checkouts





OSFHOME

Week 3_How to organize painless rese...

COS Train-the-Trainer Programme for UKRN - Cohort 2 /

Week 3_How to organize painless research collaborations

Contributors: Huijin Wang, Daniel Steger, Eric L. Ochoa, Gretchen Gauguey, Lesley Markham, Wahe Butler, Steve Boneham, Melissa Bateson, Anna Collins, Lucy Fleming, Kate Reahine, George Carter, Gillian Currie, Jim Litley, Jenni Adams, Parvaneh Poursattari, Beverly Jones

Allied Institutions: Center For Open Science

Date created: 2023-06-19 01:59 PM | Last Updated: 2024-04-10 05:31 PM

Category: Unclassified

Description: Add a brief description to your component

Wiki

This is my project

Files

Click on a storage provider or drag and drop to upload

Filter

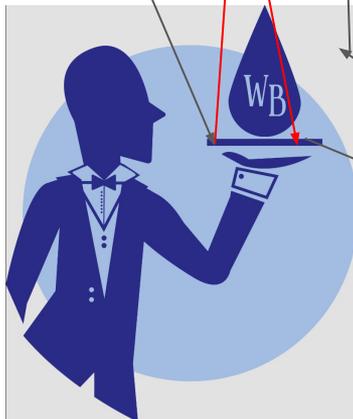
Name Modified

- Week 3_How to organize painless research co...
- OSF Storage (limited S3)
- 2023-06_Module 3_How to Organize Re... 2023-06-26 09:02 PM
- 2023-06_Module 3_Research Collabor... 2023-06-26 09:00 PM

Citation

Components

- Luicy component
Fleming, Wang, Steger & 3 more
- Jenni's component
Adams, Wang, Steger & 12 more
- KH component
Hatcher, Wang, Steger & 12 more
- Jim's component



Drive

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Name	Owner	Last m...	File size
metrics testing	me	Jan 19, 2024	—
AutoCrat Demo Folder	me	Jan 18, 2024	—
Institutions	me	Nov 30, 2023	—
Addons	me	Oct 4, 2023	—
travel	me	Sep 15, 2023	—
heliocloud	me	May 17, 2023	—
Presentations			
May Tips email	me	May 4, 2023	—
OSF Scientific Workflow			

New ETA: Revised Add-on Service

New API

- Standardized requests and responses based on category of function
 - Based on current storage, citation, and cloud computing add-ons
- Community Developers can create a new add-on using the



New ETA: More standardized API functionality, but with specific categories of types of tools (archiving, DMP creation/management)

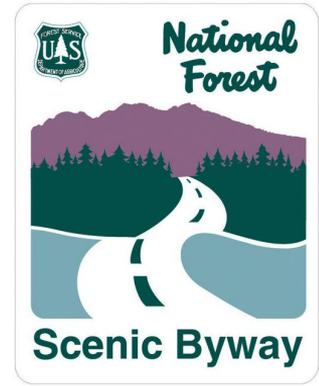
Revised Route: New Technical Development Roadmap



- **New Second phase:** Create generic API for interactions between OSF and external service. Develop specific services for existing add-on type (storage, citation, cloud computing)
- **2.5 phase:** Create documentation for new API and develop workflow for basic support and community contribution. Migrate existing add-ons to new infrastructure.
- **New Third phase:** Develop specific services for other types of add-ons (data repository/archiving, scheduling, messaging, lab notebook integration, extensions of cloud computing)
- **Fourth phase:** Open marketplace to create and find new add-ons for OSF of those types

Scenic Byway: New Addon Types

- Existing Addon migrations
- New Categories Requirements Groups
 - Data Repositories/Archiving
 - OSF Institutional Members
 - Repository Community
 - Preservation Consortium
 - Cloud Computing
 - NASA
 - European Space Agency (PolarView)



Construction Delays: I-CORPS

- Required training program for grantees
- 4 Week course focused on market research of a new technology
- Learning management software with pre class readings/and mandatory videos and assignments
- Mandatory lectures on Business Model development
- Conduct 60 interviews in the 4 week span of time
- Analysing data to develop our Business & Community Engagement Model



Pedestrian Crossing: Key Customer Segments

Customer Segments

Early career developers

Research PIs with development skills/resources

Institutional contacts with development resources

General research support staff

Contributing developers

Leaders of OS communities

Developers with domain or product interest

Keep: Maintain relationships with community members who have participated with us in the past and continue to contribute to community initiatives.

Rekindle: Providing structure and demonstrate stronger community focused mission, priorities, and acknowledgement.

Ignite: Develop relationships with other OS community or organizations with aligned values, goals, or capabilities.





Rest Stop: Documentation Review Group

- Documentation complete early Summer
- Review group - 5-6 members from various communities

“We believe that OSF platform and the open-source code are very *useful* for scholarly communities. At the same time we understand that the code is only as *usable* as the access and documentation enables it to be. This group will feature developers who have previously created integrations with the OSF or have made similar contributions to open-source tools and communities.”

Roadside Attraction: Governance and Support - Focus Group

- Beginning May 2024
- 10 members from various stakeholder groups

“We recognize that requesting members of our communities to contribute to the future of the OSF platform comes with expectations of communication, transparency, and support. This focus group will include organizers of successful open-source communities and discuss feedback on:

- Onboarding, supporting, and acknowledging contributors
- Leadership, ownership, and decision-making processes
- Code and test management
- Regular/frequent communication and coordination
- And more!”



Community Trait	The situation today (COS)	Future Ideal (OSE)
Community type	Owned	Shared
Governance Model	COS organizational board	Volunteer based to start, moving to an elected community steering group
Who makes the decisions?	COS product steering group	Community steering group
How are maintainers added?	Ad hoc per project	Onboarding process formalized through governance model
Who owns how the build system works?	COS	For OSF contributions, COS. There could be parallel builds with integrations that may be governed otherwise.
Does your current community know how your governance structure work?	Yes. But are not involved in structure or decisions.	Yes. The focus group will react to current proposals before governance is published. Positions will be elected.
Is your governance model hindering your sustainability?	Yes. There needs to be more ways for partner communities to be part of decision-making at COS.	No.



ROAD TRIP!! Work with Us!

Join one of
our teams!

Develop an
add-on!

Use OSF!



Thanks!



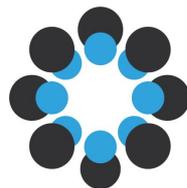
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<https://osf.io> / <https://cos.io>

ROR  <https://ror.org/05d5mza29>

Current github repo: <https://github.com/CenterForOpenScience/osf.io>

Slides available at: <https://osf.io/ZVP8K>