Open Science and Scholarship

Changing your research workflow

Bianca Kramer & Jeroen Bosman, Utrecht University Library

August 26-30, 2019

Universiteit Utrecht

@MsPhelps
@jeroenbosman

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First things first …

Monday	Tuesday	Wednesday	Thursday	Friday
Introduction	**Discovery**	**Writing**	**Outreach**	**Assessment**
• Introduction to OS & workflow model • Motivations & barriers • Cultural & disciplinary differences	• Searching for (OA) literature & data • Getting access • Using existing data for hypothesis testing	• Collaborative writing • Plain language explanations/writing • Contributorship roles • Open annotation	• Defining your audience • Academic social networks • OA/OS advocacy	• (Alt)metrics for research objects • Open peer review, PPPR • Open science in research evaluation
Preparation	**Analysis**	**Publication**	**Outreach (cont'd)**	**Wrap-up**
• Funding • Publication strategy • Citizen science	• Documenting steps • Collaborating on code and documents • Replication and reproducibility	• CC-licenses and copyright • Preprints • Journal types and journal selection	• Plan outreach actions	• Motivations and barriers • Concrete actions, next steps • What did you miss & how to cover that

- Welcome
- Who are we - introductions

Innovations in Scholarly Communication

Fields:

- Scholarly communication
- Tools for research
- Research practices
- Open Science
- Workflows

Activities:

- Exploration
- Research
- Supporting information
- Advocacy
- Workshops

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Bianca Kramer & Jeroen Bosman
101innovations.wordpress.com

exploration

tools database

global survey

research

workflows

open science

research practices

advocacy

workshops

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- Who are we - introductions
- Computers
- Wifi access: Eduroam or UU-visitor

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- Coffee, tea, refreshments, lunch, the room

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- Programme: https://tinyurl.com/sumsopenscience2019
- Social programme: drinks (Tue); special collections (Wed)

Learning outcomes

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- Understand the *why* and *how* of Open Science

- Take concrete steps to make your practices and research outcomes more open

What is your motivation to do this course?

Code of Conduct

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How do we want to work together?

https://tinyurl.com/sumsopenscience2019coc

Programme

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Programme with links to materials: https://tinyurl.com/sumsopenscience2019

Introduction

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- Open Science & Scholarship
- Cultural and disciplinary differences
- Workflow model
- Creating your own open workflow

What does that look like?

Image by Diariocritico de Venezuela

What does that look like?

Image by George Bergman, GNU-FDL

Let’s talk

Write down for yourself:

What is open science or what does it entail?

Discuss with your neighbour (2-3 min)

Open Science – our definition

Open Science is more than having publications and data openly available …

Open Science implies openly creating, sharing and assessing research, wherever viable

Open Science is …

Open to participation

- No barriers based on race, gender, income, status, language
- Involvement of societal partners in research priority setting
- Evaluations that include societal relevance
- Citizen science
- Broadly considering all knowledge (including local knowledge)
- Error-friendly culture

Open to (re)use

- Open Access, for people and machines, to:
  - Proposals and applications
  - Data
  - Code
  - Posters and presentations
  - Preprints, working papers
  - Papers and books
  - Reviews and comments
- Open, non-proprietary standards
- Open licences
- Full documentation of process, including negative results

Open to the world

- Translations
- Plain language explanations
- Outreach beyond academia
- Open to questions from outside academia
- Curation and annotation of non-scholarly information
- Participation in public debate

and: Open educational resources / Open source software / Open hardware / (no) patents

From: Bosman & Kramer (2017) Defining open science definitions

The Open Definition

The Open Definition

The **Open Definition** sets out principles that define "openness" in relation to **data and content**.

It makes **precise** the meaning of "open" in the terms **"open data"** and **"open content"** and thereby ensures **quality** and encourages **compatibility** between different pools of open material.

It can be summed up in the statement that:

> *"Open means **anyone** can **freely access, use, modify, and share** for **any purpose** (subject, at most, to requirements that preserve provenance and openness)."*

Put most succinctly:

> *"Open data and content can be **freely used, modified, and shared** by **anyone** for **any purpose**"*

THE OPEN DEFINITION IN YOUR LANGUAGE

العربية | Беларуская | Български | Català | Czech | Dansk | Deutsch | Eesti | Ελληνικά | English | Español | Euskara | Suomi | Français | Galego | עברית | हिन्दी | Croatian | Magyar | Indonesian | Íslenska | Italiano | 日本語 | ಕನ್ನಡ | 한국어 | македонски јазик | नेपाली | Norsk (bokmål) | Polszczyzna | Português Brasileiro | Português | Русский | Shqip | Српски | Svenska | తెలుగు | Türkçe | Українська | 简体中文 | 繁體中文

Why Open Science?

- Make science more transparent and accountable
- Make science more efficient
- Make science more reproducible and verifiable
- Make science more relevant (also to society)

Motivations and barriers

Open Science: a sea change ?

adapted from:
Marina Noordegraaf – Open Science: op zoek naar de schatten
Vogin cursus 2016

Support for Open Access / Open Science

From: Innovations in scholarly communication - global 2015-2016 survey. http://dx.doi.org/10.5281/zenodo.49583

i.e. openly creating, sharing and assessing research, wherever viable

The researcher: centre stage in Open Science

UU Open Science programme

Disciplinary and cultural differences

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https://tinyurl.com/summerschoolopenscience

Disciplinary variety and Open Science

	ARTS & HUMANITIES	SOCIAL SCIENCE	LIFE/HEALTH	PHYSICAL SCIENCES
Research types	often exploratory research	often confirmatory research	often confirmatory research	often confirmatory research?
Data	often textual data	also qualitative data, sometimes sensitive data	sensitive patient data / big datasets	big datasets
Publ. Types	books, chapters, articles	mostly articles and chapters	mostly articles, (syst.) reviews	preprints, conf. papers, articles
Collaboration	typically 1	typically 1-4	typically 3-10	typically 3-many
Languages	native language & (some) English	English, some in native languages	English	English
Funding	small scale funding	small & medium scale funding	large scale funding	large scale funding
Review	double blind	double + single blind	single blind	single blind

Let’s talk

Other than differences between disciplines, what differences between (groups of) people affect the way (open) research is/can be done?

In three groups, brainstorm and write down such issues and how they affect researchers

OPEN& COLLABORATIVE SCIENCE •MANIFESTO•

WE AS SCIENTISTS, DEVELOPMENT PRACTITIONERS, ACTIVISTS, PROPOSE THAT OPEN & COLLABORATIVE SCIENCE...

1. Enables a **knowledge commons**
2. Integrates **diverse scientific traditions** and ways of knowing
3. Addresses the role of **power and inequality** in knowledge production and sharing
4. Creates **opportunities for participation** at all stages of the research process
5. Fosters **equitable collaboration** between scientists and social actors
6. Incentivizes the design of **inclusive infrastructures**
7. Improves the **social and environmental well-being** of our society and planet

A model of the research workflow

Preparation:
- Define & crowdsource research priorities
- Organize project, team, collaborations
- Get funding / contract

Discovery:
- Search literature / data / code / …
- Get access
- Get alerts / recommendations
- Read / view
- …

Analysis:
- Collect, mine, extract data / experiment
- Share protocols / notebooks / workflows
- Analyze

Writing:
- Write / code
- Visualize
- Cite
- Translate

Publication:
- Archive / share publications
- Archive / share data & code
- Select journal to submit to
- Publish

Assessment:
- Comment / peer review
- Determine impact of research output
- Determine impact of researchers

Outreach:
- Archive/share posters
- Archive/share presentations
- Tell about research outside academia
- Researcher profiles/networks

Preparation:
• Define & crowdsource research priorities
• Organize project, team, collaborations
• Get funding / contract
Discovery:
• Search literature / data / code / …
• Get access
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• Read / view
• Annotate
Analysis:
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• Share protocols / notebooks / workflows
• Analyze
Writing:
• Write / code
• Visualize
• Cite
• Translate
Publication:
• Archive / share publications
• Archive / share data & code
• Select journal to submit to
• Publish
Outreach:
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• Researcher profiles/networks
Assessment:
• Comment / peer review
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Opening up the research workflow

Research workflow - activity

- On your own sheet, mark 1-3 activities that you know how to do openly (blue)
- Also mark 1-3 activities that you'd like to learn (or learn more about) how to do in an open way (yellow)
- Discuss at least two of these with your neighbour
- On the central sheet mark the same activities with blue and yellow dots

Creating your open workflow

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You can make your workflow more open by …

- adding alternative evaluation, e.g. with altmetrics
- communicating through social media, e.g. Twitter
- sharing posters & presentations, e.g. at FigShare
- using open licenses, e.g. CC0 or CC-BY
- publishing open access, ‘green’ or ‘gold’
- using open peer review e.g. at Peerage of Science
- sharing preprints, e.g. at arXiv, bioRxiv or OSF
- using actionable formats, e.g. with Jupyter
- open XML-drafting e.g. at Overleaf or Authorea
- sharing protocols & workfl. e.g. at MyExperiment
- sharing notebooks e.g. at OpenNotebookScience
- sharing code e.g. at GitHub with GNU license
- sharing data, e.g. at Zenodo, Dryad, Dataverse
- pre-registering, e.g. at OSF or AsPredicted
- commenting openly, e.g. with Hypothes.is
- using shared reference libraries, e.g. with Zotero
- sharing (grant) proposals, e.g. at RIO

Tools database

400+ Tools and innovations in scholarly communication

	web based tools a researcher can use
authors:	Bianca Kramer & Jeroen Bosman (and you?)
contact:	@MsPhelps & @JeroenBosman, both at Utrecht University Library
url:	https://docs.google.com/spreadsheets/d/1KUMSeq_Pzp4KveZ7pb5rddcsskl1XBTiLHniD0d3nDqo
friendly url:	http://bit.ly/innoscholcomm-list
related to poster:	http://dx.doi.org/10.6084/m9.figshare.1286826
related to website:	https://innoscholcomm.silk.co/
accompanying survey:	https://101innovations.wordpress.com/
background:	This is a shared database that grew out of the "101 innovations in scholarly communication" project. When we published the 101 list of selected innovations our database already contained some 200 innovations/tools. The 101 selection was strictly on innovativeness and thus did not contain recent tools if they where not innovative compared to older ones with the same functionality, even if the more recent ones were more popular or well-known. The database shared here has dropped that strict innovativeness criterion and thus contains multiple tools offering basically the same functionality. The masterfile that this database is derived from is still being worked on. Additional fields may become available here in a later stage.

http://bit.ly/innoscholcomm-list

Programme – daily structure

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Programme structure – sessions

1. Explore practices (30 min)

2. Presentations on selected topics (3 x 20 min)

3. Application in own research workflow (1 h)

4. Share experiences (30 min)

Day-to-day programme with links to all materials: https://tinyurl.com/sumsopenscience2019

Building your own workflow

Open Science and Scholarship

Changing your research workflow

Bianca Kramer & Jeroen Bosman, Utrecht University Library

August 26-30, 2019

Universiteit Utrecht

@MsPhelps
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PREPARATION

Preparation:

- Define & crowdsource research priorities
- Organize project, team, collaborations
- Get funding / contract

You can make your workflow more open by …

- sharing (grant) proposals, e.g. at RIO

You can make your workflow more open by …

- adding alternative evaluation, e.g. with altmetrics
- communicating through social media, e.g. Twitter
- sharing posters & presentations, e.g. at FigShare
- using open licenses, e.g. CC0 or CC-BY
- publishing open access, ‘green’ or ‘gold’
- using open peer review e.g. at Peerage of Science
- sharing preprints, e.g. at arXiv, bioRxiv or OSF
- using actionable formats, e.g. with Jupyter
- open XML-drafting e.g. at Overleaf or Authorea
- sharing protocols & workfl. e.g. at MyExperiment
- sharing notebooks e.g. at OpenNotebookScience
- sharing code e.g. at GitHub with GNU license
- sharing data, e.g. at Zenodo, Dryad, Dataverse
- pre-registering, e.g. at OSF or AsPredicted
- commenting openly, e.g. with Hypothes.is
- using shared reference libraries, e.g. with Zotero
- sharing (grant) proposals, e.g. at RIO

Open Science practices

sharing protocols openly, online

tore data in the most
at possible

cite OA versions of literature
data an
rovide
ations

use easily attainable software to allow
one to reprodu
results

acknowledge contributor role
in a publicati

refuse to be part of all male or all white panels

lve public / pa
drafting
posals

translate research objects in world languages

data before generating your own

h preprints,
courage feedback / open peer review

Open science practices - activity

- On the side table, you find a selection of open science practices for this specific activity group

- Discuss these with each other:
  - Is it clear what is meant? Ask for clarification if needed
  - Which practice(s) would be *realistic* for researchers*?*
  - Which practice(s) would have high *impact* for open science?

- Choose the practice you think is most promising/interesting, and hang it on the window.

Topics highlighted in this session

Preparation

- Funding
- Publication strategy
- Citizen science

Funding

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Funding opportunities - crowdfunding

Involve public in research prioritization, diversify funding sources

More in [400+ tools database]

Funding opportunities – funder demands

NIH
National Institutes of Health

wellcome trust

Check your funder: what are the demands? What are the (financial) options?

Funding opportunities – funder developments

Funds replication studies

Accepts preprints
in funding applications

Open Access publishing platform

Funding opportunities – funder developments

Funding opportunities – funder developments

rfg Open Research Funders Group

HOME ABOUT MEMBERS RESOURCES NEWS CONTACT

Mission Statement

The Open Research Funders Group (ORFG) is a partnership of funding organizations committed to the open sharing of research outputs. This will benefit society by accelerating the pace of discovery, reducing information-sharing gaps, encouraging innovation, and promoting reproducibility. The ORFG speaks in an amplified voice, and engages a range of stakeholders to develop actionable principles and policies that enable sharing and collaboration across the global research enterprise.

Funding opportunities – funder developments

Has your funder / institution signed DORA ?

Funding opportunities – support

Consultations on how to apply Open Science to:

- make research grants more competitive
- optimise the societal impact of projects

https://www.fosteropenscience.eu/search/site?keys=Clinique

sharing (grant) proposals, e.g. at RIO

RIO | Articles | About | Blog | For Authors | For Funders | Register | Login

Browse

- Articles
- Authors
- Collections

Filter

Search

Full Text | Author | Title

by Subject

- Agriculture and Forestry
- Architecture
- Arts
- Chemistry
- Computer & Information sciences
- Earth & Planetary sciences
- Ecology & Environmental sciences
- Engineering & Technology
- History
- Humanities
- Life sciences
- Materials science
- Mathematics
- Medicine & Health sciences

by Sustainable Development Goals (SDG)

- No poverty
- Zero hunger
- Good health & well-being
- Quality education
- Gender equality
- Clean water & sanitation
- Affordable & clean energy
- Decent work & economic growth
- Industry, innovation & infrastructure

7 items matching your criteria — Sort results by: Publication date newest

Section=[Grant Proposals]

Applying machine learning and image feature extraction techniques to the problem of cerebral aneurysm rupture

Steren Chabert, Tomás Mardones, Rodrigo Riveros, Maximiliano Godoy, Alejandro Veloz, Rodrigo Salas, Pablo Cox

Grant Proposal — doi: 10.3897/rio.3.e11731

10-01-2017 — Unique: 202 | Total: 301 — Reprint: € 4,80 — HTML XML PDF

DNAqua-Net: Developing new genetic tools for bioassessment and monitoring of aquatic ecosystems in Europe

Florian Leese, Florian Altermatt, Agnès Bouchez, Torbjørn Ekrem, Daniel Hering, Kristian Meissner, Patricia Mergen, Jan Pawlowski, Jeremy Piggott, Frédéric Rimet, Dirk Steinke, Pierre Taberlet, Alexander Weigand, Kessy Abarenkov, Pedro Beja, Lieven Bervoets, Snaedís Björnsdóttir, Pieter Boets, Angela Boggero, Atle Bones, Ángel Borja, Kat Bruce, Vojislava Bursić, Jens Carlsson, Fedor Čiampor, Zuzana Čiamporová-Zatovičová, Eric Coissac, Filipe Costa, Marieta Costache, Simon Creer, Zoltán Csabai, Kristy Deiner, Ángel DelValls, Stina Drakare, Sofia Duarte, Tina Eleršek, Stefano Fazi, Cene Fišer, Jean-François Flot, Vera Fonseca, Diego Fontaneto, Michael Grabowski, Wolfram Graf, Jóhannes Guðbrandsson, Micaela Hellström, Yaron Hershkovitz, Peter Hollingsworth, Bella Japoshvili, John Jones, Maria Kahlert, Belma Kalamujic Stroil, Panagiotis Kasapidis, Martyn Kelly, Mary Kelly-Quinn, Emre Keskin, Urmas Kõljalg, Zrinka Ljubešić, Irena Maček, Elvira Mächler, Andrew Mahon, Marketa Marečková, Maja Mejdandzic, Georgina Mircheva, Matteo Montagna, Christian Moritz, Vallo Mulk, Andreja Naumoski, Ion Navodaru, Judit Padisák, Snæbjörn Pálsson, Kristel Panksep, Lyubomir Penev, Adam Petrusek, Martin Pfannkuchen, Craig Primmer, Baruch Rinkevich, Ana Rotter, Astrid Schmidt-Kloiber, Pedro Segurado, Arjen Speksnijder, Pavel Stoev, Malin Strand, Sigitas Šulčius, Per Sundberg, Michael Traugott, Costas Tsigenopoulos, Xavier Turon, Alice Valentini, Berry van der Hoorn, Gábor Várbíró, Marlen Vasquez Hadjilyra, Javier Viguri, Irma Vitonytė, Alfried Vogler, Trude Vrålstad, Wolfgang Wägele, Roman Wenne, Anne Winding, Guy Woodward, Bojana Zegura, Jonas Zimmermann

Grant Proposal — doi: 10.3897/rio.2.e11321

29-11-2016 — Unique: 954 | Total: 1481 — Reprint: € 7,20 — See collection — HTML XML PDF

Unicorn-Open science for assessing environmental state, human health and regional economy

Pekka Neittaanmäki, Timo Huttula, Juha Karvanen, Tom Frisk, Jouni Tuomisto, Antti Simola, Tero Tuovinen, Janne Ropponen

Grant Proposal — doi: 10.3897/rio.2.e9232

16-05-2016 — Unique: 609 | Total: 1037 — Reprint: € 8,40 — HTML XML PDF

Software quality information needs

Daniel Graziotin

Grant Proposal — doi: 10.3897/rio.2.e8865

20-04-2016 — Unique: 729 | Total: 1207 — Reprint: € 4,80 — HTML XML PDF

NWO — contact | calendar | press | vacancies | Neder

Home | News & events | Funding | Research & results

A good proposal, yet no funding

- Funding process explained
- Grant application system ISAAC
- Peer review by referees
- Rebuttal to peer review
- The selection committee
- Assessment
- Interview or site visit
- After granting
- **A good proposal, yet no funding**
- Lodging an objection
- Confidential and public information

Submitting a research proposal to NWO costs the applicant a lot of time. This investment, however, does not guarantee the proposal being funded. A proposal has a far higher chance of being rejected than funded. For several important NWO funding instruments, proposals have only a 15 percent change of being funded. For some instruments, the figure is lower.

One reason for this low funding rate is that NWO sets high standards for the quality of research it funds. Another important reason is that the budget available is often not enough to fund all proposals that satisfy NWO's quality requirements.

Grants NWO 2013

Total number of research proposals (including preliminary proposals): **5.268**

Total number of projects granted: **1.138**

Percentage of proposals funded (including preliminary proposals): **25%**

We're going to publish all applications and decisions for this scheme

We think it's important to be transparent about the decisions we make.

Once the application period closes, we'll make all applications, both successful and unsuccessful, available on our website.

After the awards have been made, we'll also publish a summary of our decision-making process for each application.

wellcome

Pre-registering

e.g. at OSF or AsPredicted

Pre-registering

e.g. at OSF or AsPredicted

Open Science Framework | Browse | Support | Sign Up | Sign In

Promoting School Belongingness and A... | Files | Wiki | Analytics | Forks

Study Information
- Title
- Authors
- Research Questions
- Hypotheses

Sampling Plan
- Existing Data
- Explanation
- Data collection procedures
- Sample size
- Sample size rationale
- Stopping rule

Variables
- Manipulated
- Measured
- Indices

Design Plan
- Study type
- Blinding
- Study design

Study Information

Title

Provide the working title of your study. It is helpful if this is the same title that you submit for publication of your final manuscript, but it is not a requirement.

Promoting School Belongingness and Academic Performance: A Multisite Effectiveness Trial of a Scalable Student Mindset Intervention

Authors

The author who submits the preregistration is the recipient of the award money and must also be an author of the published manuscript. Additional authors may be added or removed at any time.

Geoffrey Borman, Jon Baron

Research Questions

Please list each research question included in this study.

Though undergoing any transition from the familiar to the unknown may cause the experience of belonging uncertainty, a psychological state whereby people perceive the surrounding environment as potentially threatening, the middle-school transition, more so than other school displacements, is fraught with risks for students. In the context of such changes, a variety of indicators of academic performance, including grade point average, tend to decline during middle school for all students. To mitigate belonging uncertainty and improve students' academic outcomes, we will administer a social-belonging intervention consisting of two 15-minute in-class reading and writing exercises that ask beginning middle-school students to consider and respond to a specific school experience in which they might feel belonging uncertainty. The control exercise includes the same amount of reading and writing but asks students to write about neutral middle-school experiences that are not related to belonging uncertainty, including dealing with a loud lunchroom and learning about politics. After participation, treatment students may benefit socially and psychologically and may realize improved academic outcomes.

Hypotheses

For each of the research questions listed in the previous section, provide one or multiple specific and testable hypotheses. Please state if the hypotheses are directional or non-directional. If directional,

Variables
- Manipulated
- Measured
- Indices

Design Plan
- Study type
- Blinding
- Study design
- Randomization

Analysis Plan
- Statistical models
- Transformations
- Follow-up analyses
- Inference criteria
- Data exclusion
- Missing data
- Exploratory analysis

Funding opportunities - fellowships, conferences

Join community now!

Join community now!

Sharing & publication strategy

Monday	Tuesday	Wednesday	Thursday	Friday
Introduction	**Discovery**	**Writing**	**Outreach**	**Assessment**
• Introduction to OS & workflow model • Motivations & barriers • Cultural & disciplinary differences	• Searching for (OA) literature & data • Getting access • Open annotation/curation	• Collaborative writing • Plain language explanations/writing • Contributorship roles	• Defining your audience • Academic social networks • OA/OS advocacy	• Altmetrics for research objects • Narrative assessment • Open commenting • Open peer review, PPPR
Preparation	**Analysis**	**Publication**	**Outreach (cont'd)**	**Wrap-up**
• Funding • Publication strategy • Citizen science	• Documenting steps • Collaborating on code and documents • Replication and reproducibility	• CC-licenses and copyright • Preprints • Journal types and journal selection	• IR: outreach actions	• Motivations and barriers • Concrete actions, next steps • What did you miss & how to cover that

https://tinyurl.com/summerschoolopenscience

Publication: classic versus open

Classic model: where will I publish, with a strategy for maximum prestige and ‘impact’ based on IFs or publisher brand

versus

OS model: when and how will I release/share, with a strategy based on early interaction, collaboration and societal impact

An openness and dissemination paragraph

Section from [research grant proposal by Chris HJ Hartgerink & Stephen L George published at RIO](#)

(hig

luation and dissemination

n submission, this proposal will be published in the the Research Ideas and Outcomes (RIO) journal ublic evaluation. The research project will be publicly documented with the Open Science Framework GitHub, allowing for direct reproduction of all analyses and results. This allows for rapid emination and participation of fellow researchers during the project. The Open Science Framework GitHub apply version control, which is a track changes for files (Ram 2013), providing a revision ory of all changes applied and improves (chronological) documenation of the research process. The stical methods used during the project will be implemented into the *ddfab* package in R, which is er development by the applicant and will be made freely available. The results of the project itself will hecked by another researcher (i.e., co-piloted) and written up in a manuscript that will be submitted peer-reviewed Open Access journal. This manuscript will be shared as a preprint for public feedback. esearch output will be made available with nonrestrictive Creative Commons licenses, with an explicit erence for the public domain (i.e., CC-0) and otherwise only requiring attribution (i.e., CC-BY). Such restrictive licenses allow for maximum re-use and impact of the research.

Sharing activities in the workflow

Sharing and publication strategy: considerations

Rather than share a lot quick and dirty, share consciously:

- Using open licenses (e.g. CC-BY, CC0 and MIT for software)
- Using archives and platforms that are well indexed (check)
- Use archives and platforms that are open, non-commercial, with no lock-in
- Use platforms that are sustainable and FAIR
- Take some time for abstracts, metadata
- Where possible create links between output

… and think about these things at the start of your project !

Can you apply this to your workflow?

Monday	Tuesday	Wednesday	Thursday	Friday
Introduction	**Discovery**	**Writing**	**Outreach**	**Assessment**
• Introduction to OS & workflow model • Motivations & barriers • Cultural & disciplinary differences	• Searching for (OA) literature & data • Getting access • Using existing data for hypothesis testing	• Collaborative writing • Plain language explanations/writing • Contributorship roles • Open annotation	• Defining your audience • Academic: social networks • OA/OS advocacy	• (Alt)metrics for research objects • Open peer review, PPPR • Open science in research evaluation
Preparation	**Analysis**	**Publication**	**Outreach (cont'd)**	**Wrap-up**
• Funding • Publication strategy • Citizen science	• Documenting steps • Collaborating on code and documents • Replication and reproducibility	• CC-licenses and copyright • Preprints • Journal types and journal selection	• Plan outreach actions	• Motivations and barriers • Concrete actions, next steps • What did you miss & how to cover that

For example:

Funding

- Check your funder's policies on open science
- Could you do crowdsourcing for your project ?

Sharing and publication strategy

- What aspects of openness can you consider at the start of your research project?

Final remarks Day 1

Monday	Tuesday	Wednesday	Thursday	Friday
Introduction	**Discovery**	**Writing**	**Outreach**	**Assessment**
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Preparation	**Analysis**	**Publication**	**Outreach (cont'd)**	**Wrap-up**
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For tomorrow:

- No homework, but ...

Social activities we propose/organize:

- <u>Tuesday</u>: drinks on campus (16:30)
- <u>Wednesday</u>: visit special collections (12:30)

Discovery

- Searching for (OA) literature & data
- Getting access
- Open hypothesis-driven research

Analysis

- Project & data management
- Programming and version control
- Replication and reproducibility

Open Science and Scholarship

Changing your research workflow

Bianca Kramer & Jeroen Bosman, Utrecht University Library

August 26-30, 2019

Universiteit Utrecht

@MsPhelps
@jeroenbosman

CC BY

DISCOVERY

Discovery:
• Search literature / data / code / …
• Get access
• Get alerts / recommendations
• Read / view
• Annotate

Open Science practices

Open science practices - activity

- On the side table, you find a selection of open science practices for this specific activity group

- Discuss these with each other:
  - Is it clear what is meant? Ask for clarification if needed
  - Which practice(s) would be *realistic* for researchers*?*
  - Which practice(s) would have high *impact* for open science?

- Choose the practice you think is most promising/interesting, and hang it on the window.

Topics highlighted in this session

Discovery

- Searching for (OA) literature & data
- Getting access
- Open hypothesis-driven research

Searching for data to (re)use

Monday	Tuesday	Wednesday	Thursday	Friday
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Searching for literature

This is not a literature search course, but:

- Consider to preferably use and cite open access literature?
- Consider to document your search queries
- Consider to cite/link open versions (discussion) of literature (in addition to closed versions of some publication?) see Digital Style Guide
- Consider mining the (open access) literature, e.g. using the CORE corpus
- Be careful with OA filters in search engines (The LENS, Dimensions, WoS, BASEsearch and especially in Scopus)

Searching for literature

Google scholar — for full text search in articles & acad. book, with links to open/free versions

LENS.ORG — for searching in articles, books & more, with OA filter and analytics

Microsoft Academic — for searching & browsing articles, with analytics

BASE Bielefeld Academic Search Engine — for comprehensive searching of often OA repository content

WorldCat® — searching library holdings worldwide, also for bibliographical verification

OSF PREPRINTS — metasearch for preprint servers in many fields

CORE — largest corpus of OA and open licensed articles, for e.g. text mining

Searching for data to (re)use

- Goals:
  - Save time generating own data
  - Reduce use of human & animal subjects
  - Add to robustness of findings
  - Boost efficiency at system level
- Almost everything that holds for lit search holds for data search
- But semantic gap: disconnect between search input and output

Data search strategies

- General search engine (just add “dataset” OR “data set” to your topical keywords)
- Numerical search engine (to find pages/sites with some tables/numerical data)
- Look for government data/statistical agencies data.overheid.nl
- Research data sets search engine
- Find a specialised archive first
- Use field specific sites
- Search via papers (scan papers for mentions of or cite to data sets or add “data sets” in Google Scholar)

Searching for data to (re)use

- General search engine

Searching for data to (re)use

- Using a numerical search engine

ZANRAN
Search the web for data & statistics

ZANRAN traffic OR road accidents OR casualties

✓ GRAPHS ✓ TABLES ✓ REPORTS Anywhere Any date

AND, OR, NOT in upper case control boolean queries, in lower case they a

Data & statistics on **traffic OR road accidents OR casualties** – **3187125** results

LIFE, ACCIDENT & HEALTH ACCIDENT & HEALTH, PROPERTY, CASUALTY, MARINE LIFE, ACCIDENT & HEALTH ACCIDENT & HEALTH, PROPERTY, CASUALTY, MARINE, VEHICLE ACCIDENT & HEALTH, PROPERTY, CASUALTY, MARINE, ...
www.ok.gov/old/documents/ANNUALREPORT2005.pdf
& HEALTH, PROPERTY, **CASUALTY**, MARINE, **VEHICLE ACCIDENT** & HEALTH, PROPERTY, **CASUALTY**, MARINE, VEHICLE PROPERTY, **CASUALTY**, MARINE, **VEHICLE ACCIDENT** & HEALTH, PROPERTY ...
PROPERTY & **CASUALTY** LIFE LIFE HEALTH MAINT.ORG. PROPERTY & **CASUALTY** LIFE, **ACCIDENT**
Jun 2005 | Oklahoma's Official Web Site URL

Indicator description Percentage change in road accident casualties between 1994-1998 average - children KSI Number of road accident casualties - all slight injuries Percentage change in road accident ...
www.derby.gov.uk/NR/rdonlyres/6DCFC27E-1EA0-45B7-A7DE-1842959F2950/0/FinalBVPP2007.pdf
casualties - all KSI Percentage change in **road accident casualties** over previous year - all KSI Percentage change in **road accident casualties** over 1994 - 1998 average - all KSI Number of **road accident casualties** - children KSI BV99a (ii) BV99a (iii
Jan 1998 | Derby City Council URL

ROAD ACCIDENT CASUALTIES BY CASUALTY AND ROAD USER TYPE
www.eelga.gov.uk/documents/Policy and Priorities/EvidenceBase/InfoHub/Transport/AMR Transport tables.xls
ROAD ACCIDENT CASUALTIES BY **CASUALTY** AND **ROAD** USER TYPE Source: All **casualties** by **road** user type - East of England Regional Transport Statistics: DfT atablespublications/regionaldata/rts/ Return to contents page ...
All **casualties**, All killed, seriously injured, All car users, All motorcycle users, All pedal cycle users
May 2010 | East of England Local Government Association URL

Searching for data to (re)use

- Data at governments/statistical agencies UNdata A world of information StatLine data.overheid.nl

Searching for data to (re)use

- Search engines for research data sets

Google Dataset Search Beta

OpenAIRE | EXPLORE

DataCite DataSearch Beta

Searching for data to (re)use

- Find a specialised archive first

re3data.org
REGISTRY OF RESEARCH DATA REPOSITORIES

re3data.org

Filter

Subjects
Content Types
Countries
AID systems
API
Certificates
Data access
Data access restrictions
Database access
Database licenses
Data licenses
Data upload
Data upload restrictions
Enhanced publication
Institution responsibility type
Institution type
Keywords
Metadata standards
PID systems
Provider types
Quality management
Repository languages
Software
Syndications
Repository types
Versioning

transport

← Previous 1 2 Next →

Found 45 result(s)

ETH Travel Data Archive
ETHTDA

Subject(s)	Traffic and Transport Systems, Logistics · Construction Engineering and Architecture
Content type(s)	Standard office documents · Software appli
Country	Switzerland

!!! The documents are stored in the ETH Web archive and are no longer maintained !!! The ETHTDA archives a data sets are included after careful cleaning and further documentation.

Portal to Los Alamos Opacity Codes
TOPS opacities

Subject(s)	Materials Science · Astrophysics and Astro
Content type(s)	Scientific and statistical data formats · othe
Country	United States

Portal to Los Alamos Opacity Codes is your gateway to the set of opacity codes developed at the Los Alamos N mixture of any elements for which OPLIB data exist is supported. Opacities of special mixtures that are importar

Searching for data to (re)use

- Use field specific sites

Searching for data to (re)use

- Search via papers

Found relevant data(set), now what?

- Read full description/metadata
- Search for literature citing/using the data, e.g. data paper
- Check availability and license:
  - reusable for your purpose?
  - costs, or limitations?
  - is format usable or convertible?
- Download and archive the most raw version
- Optionally contact creator of the data to get more background
- Use copy to explore further: size, age, clarity, integrity, gaps

Getting access

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Image: [Marina Noordegraaf](#) CC BY NC SA

Get access – survey results

https://101innovations.wordpress.com/survey-results/research-activities/get-access/

Getting access - some options

HOW TO GET THE PDF?

Alternatives to the publisher version of full-text journal articles

updated: February 20, 2018

1 UNPAYWALL

Get full-text of research papers as you browse, using Unpaywall's index of 10 million legal, open access articles. For CHROME | Firefox
http://unpaywall.org/

2 GOOGLE SCHOLAR BUTTON

Easy access to Google Scholar from any web page. Find full text on the web or in your university library. Select the title of the paper on the page you're reading, and click the Scholar button to find it. for CHROME | Firefox
https://addons.mozilla.org/nl/firefox/addon/google-scholar-button/

3 KOPERNIO

Get instant notifications of available versions from your library or otherwise. Promising features like a personal Locker, saved articles and more.
https://kopernio.com/

4 OPEN ACCESS BUTTON

Free, legal research articles and data delivered instantly or automatically requested from authors. You can do this from the website, or install a browser extension/API.
https://openaccessbutton.org/

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https://twitter.com/search?q=%23icanhazpdf

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Request full-text

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This is not free, but often a fast option, and often much cheaper than buying it from the publisher. Libraries usually have special rates for staff, phd's and students! Ask your library for advice.

Overview Dutch University Libraries

8 NARCIS

NARCIS provides access to scientific information, including (open access) publications from the repositories of all the Dutch universities, KNAW, NWO and a number of research institutes, datasets from some data archives as well as descriptions of research projects, researchers and research institutes.
http://www.narcis.nl/

9 OSF PREPRINTS

OSF offers acces to over 2 million open access preprints.
https://osf.io/preprints/

10 DIRECTORY OF OPEN ACCESS JOURNALS

DOAJ offers access to over 10.000 open access journals.
https://doaj.org/

11 SCIENCE OPEN

Science Open contains over 37 million articles, a large part in open access.
http://www.scienceopen.com/

12 SCI-HUB

If all else fails, you may be tempted to use Sci-Hub. Do realize, however, that in many countries, including The Netherlands, the use of Sci-Hub is considered as an illegal act, as it involves content protected by copyright laws and licensing contracts.

and also in:

Web of Science

Dimensions

adapted from: http://openaccess.nl/sites/www.openaccess.nl/files/documenten/howtogettothepdf_march_2018.pdf

How much Open Access is there ?

https://doi.org/10.7717/peerj.4375

How much Open Access is there ?

https://doi.org/10.7717/peerj.4375

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Elsevier Biotech @ElsevierBiotech · Oct 4, 2018

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type	preprint	gold	hybrid-gold	green
who?	author	publisher	publisher	author
where?	preprint archives	~10K open access journals	almost all sub-scription journals	institutional repository
when?	before/around submission to jrnl	simultaneous with publication	simultaneous with publication	upon acceptance, but often embargo
costs?	free	0-4000 USD	~1000-6000 USD	free
fulfill funder req.?	mostly not	always	always, but discussed now	often, but often not if embargoed
funding	n.a.	sometimes funder, UU OA fund 50%	sometimes funder / included in big deals	n.a.
license/copyright	choose CC-license, copyright retained	choose CC-license, often keep copyright	often CC in exclusive license for publisher	often none?

How open is it? Creative Commons licenses

Getting access – some options

your library,
ILL

Google Scholar

Google
scholar

Getting access – some options

Google

Dinosaurs in decline tens of millions of years before their final extinction

Scholar

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Since 2017
Since 2016
Since 2013
Custom range...

Sort by relevance
Sort by date

include patents
include citations

Dinosaurs in decline tens of millions of years before their final extinction
M Sakamoto, MJ Benton... - Proceedings of the ..., 2016 - National Acad Sciences
Abstract Whether dinosaurs were in a long-term decline or whether they were reigning strong right up to their final disappearance at the Cretaceous–Paleogene (K-Pg) mass extinction event 66 Mya has been debated for decades with no clear resolution. The dispute has continued unresolved because of a lack of statistical rigor and appropriate evolutionary framework. Here, for the first time to our knowledge, we apply a Bayesian phylogenetic ...
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Getting access – some options

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Dinosaurs in decline tens of millions of years before their final extinction
M Sakamoto, MJ Benton… - Proceedings of the …, 2016 - National Acad Sciences
Abstract Whether dinosaurs were in a long-term decline or whether they were reigning strong right up to their final disappearance at the Cretaceous–Paleogene (K-Pg) mass extinction event 66 Mya has been debated for decades with no clear resolution. The dispute
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[PDF] Dinosaurs in decline tens of millions of years before their final extinction
M Sakamoto, MJ Benton, C Venditti - research-information.bristol.ac.uk
Sakamoto, M., Benton, MJ, & Venditti, C. (2016). Dinosaurs in decline tens of millions of years before their final extinction. Proceedings of the National Academy of Sciences of the United States of America, 113(18), 5036-5040. DOI: 10.1073/pnas.1521478113 ... Link to published version
Cite

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[PDF] Dinosaurs in decline tens of millions of years 6 before their final extinction 7
M Sakamoto, MJ Benton, C Venditti - methods - pdfs.semanticscholar.org
Page 1. 1 Classification: Biological Sciences (Evolution) 1 2 3 4 5 Dinosaurs in decline tens of millions of years 6 before their final extinction 7 8 Short title: Long-term decline of dinosaurs 9 10 Manabu Sakamoto1, Michael J. Benton2 and Chris Venditti1 11 12 13 1 School of
Cite

[PDF] semanticscholar.org

Dinosaurs in decline tens of millions of years before their final extinction
M Sakamoto, MJ Benton… - Proceedings of the …, 2016 - National Acad Sciences
Abstract Whether dinosaurs were in a long-term decline or whether they were reigning strong right up to their final disappearance at the Cretaceous–Paleogene (K-Pg) mass extinction event 66 Mya has been debated for decades with no clear resolution. The dispute
Cite

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M Sakamotoa, MJ Bentonb, C Vendittia - researchgate.net
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Cite

[PDF] researchgate.net

Getting access – some options

your library, ILL

Google Scholar

OA tools

Getting access – some options

Getting access – some options

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SCI-HUB

How many of your papers are Open Access?

Welcome to dissemin

Dissemin detects papers behind pay-walls and invites their authors to upload them in one click to an open repository.

Try any author name | Search

Green open access

Many researchers do not use their right to make their papers freely available online, in addition to the paywalled version offered by traditional publishers.

This forces libraries to buy overpriced electronic subscriptions to journals, when they can afford them at all.

Open repositories

Uploading your papers on your own webpage is not enough. Such copies are less stable and harder to find than documents uploaded to well-indexed repositories.

Dissemin searches for copies of your papers in a large collection of open repositories and tells you which ones cannot be accessed.

What do journals allow?

SHERPA/RoMEO

Publisher copyright policies & self-archiving

Search

Journal titles or ISSNs Publisher names

Exact title starts with contains ISSN

Advanced Search Search Reset

Use this site to find a summary of permissions that are normally given as part of each publisher's copyright transfer agreement.

Can you apply this to your workflow?

Monday	Tuesday	Wednesday	Thursday	Friday
Introduction	**Discovery**	**Writing**	**Outreach**	**Assessment**
• Introduction to OS & workflow model • Motivations & barriers • Cultural & disciplinary differences	• Searching for (OA) literature & data • Getting access • Using existing data for hypothesis testing	• Collaborative writing • Plain language explanations/writing • Contributorship roles • Open annotation	• Defining your audience • Academic social networks • OA/OS advocacy	• (Alt)metrics for research objects • Open peer review, PPPR • Open science in research evaluation
Preparation	**Analysis**	**Publication**	**Outreach (cont'd)**	**Wrap-up**
• Funding • Publication strategy • Citizen science	• Documenting steps • Collaborating on code and documents • Replication and reproducibility	• CC-licenses and copyright • Preprints • Journal types and journal selection	• Plan outreach actions	• Motivations and barriers • Concrete actions, next steps • What did you miss & how to cover that

For example:

Searching data

- Look for data for your current project
- List data archives that are most relevant in your (sub)field

Getting access

- Check open access status of paywalled papers
- How many of your papers could you make open access?

Open hypothesis driven research

- What data can you share to help others generate hypotheses?
- Can you pre-register your next project (or start an offline version)?

Open Science and Scholarship

Changing your research workflow

Bianca Kramer & Jeroen Bosman, Utrecht University Library

August 26-30, 2019

Universiteit Utrecht

@MsPhelps
@jeroenbosman

CC BY

ANALYSIS

Analysis:

- Collect, mine, extract data / experiment
- Share protocols / notebooks / workflows
- Analyze

Open Science practices

assessment

- check (statistical) methods /reporting
- assess on soundness, not novelty

preparation

- pre-registration (can be embargoed)
- fund replication studies

experimenting / analysis

- share protocols, scripts, code
- use materials ids (RRIDs)
- use open hard- and software
- share raw and processed data

publication

- use persistent IDs for pre-registrations, data, code, methods, materials, contributors
- archive stable versions of code with all dependencies
- create executable/forkable publications

Topics highlighted in this session

Analysis

- Project & data management
- Programming and version control
- Replication and reproducibility

PREREGISTERED

COS
CENTER FOR
OPEN SCIENCE
About COS
Our Products
Our Services
Our Communities
Blog
Contact Us
Donate
Registered Reports: Peer review before results are known to align scientific values and practices.

Explore protocols.io

Discover free, up-to-date research protocols and useful content in your field of interest

Version, modify, and discuss existing protocols

You can "clone" protocols in order to be able to modify existing protocols from other scientists. You can also ask questions and comment on step-level or on the entire protocols.

OPEN MATERIALS

Getting Started

The Resource Identification Portal was created in support of the Resource Identification Initiative, which aims to promote research resource identification, discovery, and reuse. The portal offers a central location for obtaining and exploring **Research Resource Identifiers (RRIDs)** - persistent and unique identifiers for referencing a research resource. A critical goal of the RII is the widespread adoption of RRIDs to cite resources in the biomedical literature and other places that reference their *generation* or *use*. RRIDs use established community identifiers where they exist, and are cross-referenced in our system where more than one identifier exists for a single resource. Some examples are shown below, which are linked to metadata about each resource:

Antibody: RRID:AB_90755

Organism: RRID:RGD_4139885

Cell Line: RRID:CVCL_0033

Tool: RRID:SCR_007358

Resource Identification Initiative

DRYAD
About
For researchers
For organizations
Contact us
Log in
Sign up
DataDryad.org is a curated general-purpose repository that makes the data underlying scientific publications discoverable, freely reusable, and citable. Dryad has integrated data submission for a growing list of journals;
Submit data now
How and why?
Search for data

store, share, discover research
get more citations for all of the outputs of your academic research
over 5000 citations of figshare content to date
zenodo
Search
Upload
Communities

OPEN DATA

Findable
Accessible
Interoperable
Reusable

Can you apply this to your workflow?

Monday	Tuesday	Wednesday	Thursday	Friday
Introduction	**Discovery**	**Writing**	**Outreach**	**Assessment**
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OSF: http://osf.io

Utrecht University Research Data Management website:
https://www.uu.nl/en/research/research-data-management/guides

List of data repositories (also refer to this morning's materials):
http://journals.plos.org/plosone/s/data-availability#loc-recommended-repositories

Which research data management information do you give to your students?
How can your department improve the way they work?

Can you apply this to your workflow?

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Practice computational reproducibility:
https://docs.google.com/document/d/1WvApy4ayQcZaLRpD6bvAqhWncUaPmmRimT016-PrLBk/edit?usp=sharing

Code Ocean in detail:
https://help.codeocean.com/getting-started

Try out any online introduction to Git.
Learn RMarkdown: https://bookdown.org/yihui/rmarkdown/

Open Science and Scholarship
Changing your research workflow

Bianca Kramer & Jeroen Bosman, Utrecht University Library

August 26-30, 2019

Universiteit Utrecht

@MsPhelps
@jeroenbosman

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WRITING

Open Science practices

sharing protocols openly, online

tore data in the most
at possible

cite OA versions of literature
data an
rovide
ations

use easily attainable software to allow
one to reprodu
results

acknowledge contributor role
in a publicati

refuse to be part of all male or all white panels

lve public / pa
drafting
posals

translate research objects in world languages

data before generating your own

h preprints,
courage feedback / open peer review

Open science practices - activity

- On the side table, you find a selection of open science practices for this specific activity group

- Discuss these with each other:
  - Is it clear what is meant? Ask for clarification if needed
  - Which practice(s) would be *realistic* for researchers*?*
  - Which practice(s) would have high *impact* for open science?

- Choose the practice you think is most promising/interesting, and hang it on the window.

Topics highlighted in this session

Writing

- Collaborative writing
- Plain language explanations/writing
- Contributorship roles
- Open annotation and curation

Your research

Monday	Tuesday	Wednesday	Thursday	Friday
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Preparation	**Analysis**	**Publication**	**Outreach (cont'd)**	**Wrap-up**
• Funding • Publication strategy • Citizen science	• Documenting steps • Collaborating on code and documents • Replication and reproducibility	• CC-licenses and copyright • Preprints • Journal types and journal selection	• IR: outreach actions	• Motivations and barriers • Concrete actions, next steps • What did you miss & how to cover that

https://tinyurl.com/summerschoolopenscience

CONTINUOUS
Age →

nature
A 3D wiring diagram for the mouse brain
PAGE 397

An activist uses science to fight animal research p. 346
A battle of principles in the e-cigarettes debate p. 375
Counting molecular garbage chutes in intact neurons p. 439
Science
$10
23 JANUARY 2015
sciencemag.org
AAAS
Catching a comet
Rosetta follows a relic of the early solar system toward the Sun
pp. 358 & 387

How to Learn From a
FAILED EXPERIMENT!
Soulfires
Resilient
Communities

What’s your research? Sketch it !

Alyssa Zuercher Reichardt

What’s your research? Sketch it !

Sketch your research using images, diagrams, single words, etc

1. Field / discipline
2. Research topic
3. Method
4. Results
5. Audience(s)
6. Impact

What’s your research? Sketch it !

Based on your sketches, tell others about your research (in groups of 3)

Another awesome example ...

Dasapta Erwin Irawan
https://osf.io/gfde3/

… and some advice

D@sapta Erwin Irawan
@dasaptaerwin

Do you want to start #sketchnoting. Just start, never think what it will look like at the end, because taking notes are learning and learning is part of living… Bye #OAI11. Thank you for all appreciations, spirits, & the knowledge shared. Glad to be part of the open community.

TAKING NOTES is part of learning proses.
SO WHY WAIT?
get your paper & pen
MORE
LESS
DON'T WORRY about the format.
FINISH
JUST START
Creating not thinking
As long as you have ideas and want to share them.
BOXES, LINES
or PICTORIAL
PORTRAIT
LANDSCAPE
in colour or BW
If you are interested in making sketchnote, just start. ALL you need is a piece of paper & a pen.
Never mind the format nor what it looks like @ the end. It can be just TEXT... or boxes...
with lines & ARROW. Just write / draw with your heart, because taking NOTES R LEARNING...
AND LEARNING IS PART OF LIVING.

WRITING

Open Science practices

sharing protocols openly, online

tore data in the most
at possible

cite OA versions of literature
data an
rovide
ations

use easily attainable software to allow
one to reprodu
results

acknowledge contributor role
in a publicati

refuse to be part of all male or all white panels

lve public / pa
drafting
posals

translate research objects in world languages

data before generating your own

h preprints,
courage feedback / open peer review

Open science practices - activity

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- Discuss these with each other:
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  - Which practice(s) would have high *impact* for open science?

- Choose the practice you think is most promising/interesting, and hang it on the window.

Topics highlighted in this session

Writing

- Collaborative writing / plain language explanations
- OS/OA advocacy
- Contributorship roles
- Annotation and curation

Collaborative writing

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Image: Michael Mandiberg CC BY SA

Plain language summaries

Monday	Tuesday	Wednesday	Thursday	Friday
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- [Write a plain language summary (using a collaborative writing platform)]

Contributorship roles

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Open annotation and curation

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Can you apply this to your workflow?

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Collaborative writing / plain language explanation

- Write a plain language summary (using a collaborative writing platform)

Contributorship roles

- Explore contributorship roles - how would this work out for your own (past, current or future) project?

Annotation and curation

- Try out the platform-independent commenting/annotation tool Hypothes.is
- Help curate knowledge by adding references to Wikipedia articles

Write – survey results

What tools/sites do you use to write / prepare your manuscript?

Choose as many as you like

https://101innovations.wordpress.com/survey-2015-2016/

Plain language summaries

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- [Write a plain language summary (using a collaborative writing platform)]

Collaborative writing

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Image: Michael Mandiberg CC BY SA

Tool alternatives for WRITING

collaborative writing, e.g. at Authorea or Overleaf

Share drafts, get comments

use publisher templates, submit directly

RMarkdown (combining text, code, graphs etc)

Tutorial: http://rpubs.com/ivim/Rmd-v1

Contributorship roles

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Image: Tyne & Wear Archives & Museum
no known copyright restrictions

contributorship roles, eg CRediT taxonomy

acknowledge all contributions

make specific contributions visible (e.g. link to profiles)

machine readable

contributorship roles, eg CRediT taxonomy

used by e.g. PLOS, Cell Press, F1000 Research, Geological Society of London

Cell Press survey 2015

contributorship roles, eg CRediT taxonomy

- Are the roles in the CRediT taxonomy applicable in all disciplines?
- Do all types of contribution warrant authorship?

Open annotation and curation

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Open annotation

Why annotate? According to the open annotation group from W3C you can annotate to:

- Provide an aide-memoire - through highlighting and bookmarking
- Share and inform - through commenting and describing
- Improve discovery - through tagging and linking
- Organize resources - through classifying and identifying
- Interact with others - through questioning and replying

Full presentation on W3C open annotation model:

Open annotation

Ways to annotate/comment/discuss publicly:

- Using the local commenting options of the (publication) platform
- Using generic commenting tools like Hypothesis
- Using Twitter
- Using Reddit
- ….

Public comments can also have private functions, e.g. functioning as external memory

The 400+ tools database lists additional tools for commenting & annotation (categories 8 and 27)

commenting openly, e.g. with Hypothes.is

Explore this journal >

Open Access Creative Commons

Research Article

The influence of station density on climate data homogenization

S. Gubler, S. Hunziker, M. Begert, M. Croci-Maspoli, T. Konzelmann, S. Brönnimann, C. Schwierz, C. Oria, G. Rosas

First published: 6 June 2017 Full publication history

DOI: 10.1002/joc.5114 View/save citation

Cited by (CrossRef): 2 articles Check for updates | Citation tools

Am score 2

Funding Information

ABSTRACT

Relative homogenization methods assume that measurements of nearby stations experience similar climate signals and rely therefore on dense station networks with high-temporal correlations. In developing countries such as Peru, however, networks often suffer from low-station density. The aim of this study is to quantify the influence of network density on homogenization. To this end, the homogenization method HOMER was applied to an artificially thinned Swiss network

View issue TOC
Volume 37, Issue 1
15 November 201
Pages 4670–4683

Public

Show all annotations (12)

VictorVenema Jan 7

> They found that a reduction of the Slovenian station network from 60 to 44 (i.e. a reduction from one station per 307 ... More

The distance dependence of the spatial correlations are also not that high. So you do need a clear difference in station density to get an effect. The number of stations and thus sometimes references may have some influence as well.

hypothes.is

Annotate with anyone, anywhere

Our mission is to bring a new layer to the web. Use Hypothesis to discuss, collaborate, organize your research, or take personal notes.

Install Or... Paste a link... Annotate!

There's also a bookmarklet or you can add it to your website.

NB Public Hypothesis annotations are CC0 licensed

What Hypothes.is allows you

- Adding annotations to (phrases/sections in) almost any page with a URL
- Making annotations public, private or only viewable for a defined group (e.g. for education)
- Sharing a link to an annotation
- Sharing a link to a page with the annotations
- Reacting to annotations
- Searching through annotations
- Viewing someone’s annotating history
- Flagging an annotation

Curating knowledge, e.g. in Wikipedia

Xkcd CC-BY-SA

Curating knowledge, e.g. in Wikipedia

Add references to literature/sources to Wikipedia articles, esp. where their need is indicated

WIKIPEDIA
The Free Encyclopedia

Main page
Contents
Featured content
Current events
Random article
Donate to Wikipedia
Wikipedia store

Interaction

Help

Article Talk

Self-image

From Wikipedia, the free encyclopedia

Not to be confused with Self-awareness, Self-concept, Self-consciousness, Self-per

Self-image is the mental picture, generally of a kind that is quite resistant to change, th have been learned by that person about themself, either from personal experiences or t people think about you?".[citation needed]

Self-image may consist of three types:[citation needed]

1. Self-image resulting from how an individual sees oneself.
2. Self-image resulting from how others see the individual.
3. Self-image resulting from how the individual perceives others see them or not.

Curating knowledge, e.g. in Wikipedia

Contribute to Wikipedia pages in your language ….

A	B	C	D	E	F	I	J	K	L
Open science articles in Wikipedia; feel free to add to or use this sheet but don't take anything out	general information			links to language versions and (in hidden columns) article length for EN/NL + inclusion in category 'Open science' for EN/NL					
Article topics	field	# language versions linked from EN article +1 at 201802/3	# language versions linked from EN article +1 at 201802/3	Deutsch	English	Español	Français	Italiano	Nederlands
Citation	citations	29		Quellenangabe	Citation	Referencia bibliográfica	Référence bibliograp	x	Citatie
Citation analysis	citations	12		Zitationsanalyse	Citation analysis	Análisis de citas	x	x	x
Citation index	citations	19		Zitationsdatenbank	Citation index	Índice de citación	Indice de citation	Indice di citazione	Citatie/index
I4OC	citations	3		x	Initiative for Open Ci	I4OC	x	x	x
Open Citations	citations	1		x	OpenCitations	OpenCitations	x	x	x
Citizen science	citizen science	24		Citizen Science	Citizen science	Ciencia ciudadana	Sciences participativ	Citizen science	Burgerwetenschap
DIY science	citizen science			x	x	x	x	x	x
Creative Commons	copyright-licences	81		Creative Commons	Creative Commons	Creative Commons	Creative Commons	Creative Commons	Creative Commons
Creative Commons licenses	copyright-licences	44		Creative-Commons-	Creative Commons l	Licencias Creative Comm	Licence Creative Co	Licenze Creative Co	Creative Commons-licenties
Public domain	copyright-licences	90		Gemeinfreiheit	Public domain	Dominio público	Domaine public (pro	Pubblico dominio	Publiek domein
Altmetrics	evaluation	8		Altmetrik	Altmetrics	Altmetrics	x	Altmetrics	x
Altmetrics manifesto	evaluation			x	x	x	x	x	x
article-level metrics	evaluation	1		x	article-level metrics	https://es.wikipedia.org/wi	x	x	x
DORA	evaluation	1		x	San Francisco Decla	Declaración de San Franc	Déclaration_de_San	x	Verklaring van San Francisco
H-index	evaluation	32		H-Index	H-index	Índice h	Indice h	Indice H	H-index
Impact factor	evaluation	38		Impact Factor	Impact factor	Factor de impacto	Facteur d'impact	Fattore di impatto	Impactfactor
Leiden manifesto	evaluation			x	x	x	x	x	x
Open peer review	evaluation	3		Offenes Peer-Revie	Open peer review	Revisión por pares en abi	x	x	x
Peer review	evaluation	44		Peer-Review	Peer review	Revisión por pares	Évaluation par les pa	Revisione paritaria	Peerreview
DFG (german funder)	funding	16		Deutsche Forschung	Deutsche Forschung	Deutsche Forschungsgem	Fondation allemand	x	x
FP (1-9)	funding	10		Forschungsrahmenp	Framework Program	Programa Marco	Programme-cadre_p	x	x
Horizon 2020	funding	11		Horizont 2020	Horizon 2020	Horizonte 2020	Horizon 2020	Horizon 2020	x

Curating knowledge, e.g. at Ask Open Science (formerly Open Science Q&A)

Can you apply this to your workflow?

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For example:

Collaborative writing / plain language explanation

- Write a plain language summary (using a collaborative writing platform)

Contributorship roles

- Explore contributorship roles - how would this work out for your own (past, current or future) project?

Annotation and curation

- Try out the platform-independent commenting/annotation tool Hypothes.is
- Help curate knowledge by adding references to Wikipedia articles

Open Science and Scholarship

Changing your research workflow

Bianca Kramer & Jeroen Bosman, Utrecht University Library

July 16-20, 2018

Universiteit Utrecht

@MsPhelps
@jeroenbosman

CC BY

PUBLICATION

Publication:

- Archive / share publications
- Archive / share data & code
- Select journal to submit to
- Publish

Open Science practices

Open science practices - activity

- On the side table, you find a selection of open science practices for this specific activity group

- Discuss these with each other:
  - Is it clear what is meant? Ask for clarification if needed
  - Which practice(s) would be *realistic* for researchers*?*
  - Which practice(s) would have high *impact* for open science?

- Choose the practice you think is most promising/interesting, and hang it on the window.

Topics highlighted in this session

Publication

- CC-licenses and copyright
- Preprints
- Journal types and journal selection

Can you apply this to your workflow?

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For example:

CC licenses and copyright

- …
- …

Preprints

- …
- …

Journal types and journal selection

- ….
- ….

Open Science and Scholarship

Changing your research workflow

Bianca Kramer & Jeroen Bosman, Utrecht University Library

August 26-30, 2019

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@MsPhelps
@jeroenbosman

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OUTREACH

Outreach:

- Archive/share posters
- Archive/share presentations
- Tell about research outside academia
- Researcher profiles/networks

Open Science practices

Open science practices - activity

- On the side table, you find a selection of open science practices for this specific activity group

- Discuss these with each other:
  - Is it clear what is meant? Ask for clarification if needed
  - Which practice(s) would be *realistic* for researchers*?*
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- Choose the practice you think is most promising/interesting, and hang it on the window.

Topics highlighted in this session

Outreach

- OS/OA advocacy
- Academic social networks
- Citizen Science
- Outreach example

Citizen Science (or DIY science?)

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Image: [Proyecto Lanius]

Citizen Science: narrow and broad definitions

From Wikipedia, describing stance of Rick Bonney:

“projects in which nonscientists, such as amateur birdwatchers, voluntarily contributed scientific data”

Citizen Science: narrow and broad definitions

From the 2014 EU Green Paper on Citizen Science for Europe:

"Citizen Science refers to the **general public engagement** in scientific research activities when citizens actively contribute to science either with their **intellectual effort or surrounding knowledge** or with their **tools and resources**. Participants provide experimental data and facilities for researchers, raise new questions and co-create a new scientific culture. While adding value, **volunteers acquire new learning and skills**, and deeper understanding of the scientific work in an appealing way. As a result of this open, networked and trans-disciplinary scenario, science-society-policy interactions are improved leading to a **more democratic research based on evidence-informed decision making**."

Citizen Science, why?

- Cheap labour?
- Access to places (e.g. people’s gardens, people’s mobile phones)
- Attract (social) media attention
- Boost image of science and trust in science
- Involve more minds, of people with a lot of down to earth experience
- Involve public in agenda setting, making the research relevant to society
- Get young people’s interest in science, contribute to education
- Involve people in a subject for a cause, also in the longer term and also as part of participatory research

Citizen Science, how?

- Involvement levels: continuum from data delivery/crowdsourcing to participatory science
- Using the direct environment of people; using equipment people already have or is cheap to obtain
- Further goal: also translation of results into applications
- Contact organizations of citizen scientists
- Sometimes there are special grants for citizen science projects (EU, US-NSF)
- Check the citizen science associations:

  ECSA and CSA

From: Open Scientist (2013) The Levels of Citizen Science Involvement - Part 1

Citizen Science: issues

- Quantity versus quality of data
- Often long term projects
- Researcher becomes facilitator?
- Requires soft skills from academic researchers
- Status of volunteers in sharing/publishing
- Openness: is Citizen Science open by default?

Citizen Science: example SETI@home & Boinc

with:

List of example citizen science projects

Lend computer processing time/power to find extraterrestrial intelligence

Level: distributed computing

Citizen Science: example ForestWatchers

This citizen science project aims at making possible to anyone (locals, volunteers, NGOs, governments, etc), anywhere in the world, to monitor selected patches of forest across the globe, almost in real-time, using a notebook, a tablet or a smart phone connected to the Internet.

Level: observational measurement

Citizen Science: example GalaxyZoo from Zooniverse

GALAXY ZOO

from:

ZOONIVERSE

Help classifying large numbers of distant galaxies

Level: observational analysis

Citizen Science: example Dutch Ja-ik-wil project

Institutions for Collective Action

WWW.COLLECTIVE-ACTION.INFO

Project 'Ja, ik wil!'

- Homepage 'Ja, ik wil!'
- Wat zijn ondertrouwakten?
- Ondertrouwakten als bron
- Waarom Amsterdam?
- Doe mee!
- Wat levert het u op?
- Waarom dit project?
- Nog meer weten?
- Blijf op de hoogte!
- Wist u dat...

Help analyse historical marriage records

Level: observational analysis

Citizen Science: example EVOCA

Environmental virtual observatories for connective action

How can life-science knowledge, digital technologies and responsible innovation concepts be leveraged in development contexts to build inclusive virtual platforms for **environmental information** that enable **connective action** for addressing development challenges in crop, water, health and wildlife management?

Level: various, collective decision making, action research

Citizen Science: example De WAR / Universiteit van Amersfoort

COÖPERATIEVE UNIVERSITEIT AMERSFOORT

Home Research Publicaties Onderzoekers

Research

Binnen Universiteit Amersfoort zijn de volgende onderzoeksgroepen en pro

- Meet je stad! is een burgerwetenschapsgroep die klimaatverandering
- Historische Watersystemen - Onderzoek naar vloeiweiden
- Binnenstedelijke voedselproductie
- diy sensorlab - open lab voor doe het zelf sensorontwikkeling
- Bijensterfte
- Biolab Amersfoort is een open werkplaats voor biologie en scheikund materiaalonderzoek met schimmels, algen en planten. Iedereen is we
- SAMKUL Project: Understanding Cultural Conditions for Climate Char
- Go Figure: Visualizing Climate Change (FIGO)
- Fabfuse: jaarlijkse bijeenkomst voor grassroots onderzoek. Zie hier he 4.
- Het kweken van kroos voor waterzuivering en eiwitproductie
- Grassroots organisatie
- FabLab - Digitale Fabricage en onderzoek naar open kennisuitwisseli

Type: various, fully independent

Citizen Science: example picture taking

Type: contributory: data collection

Citizen Science: georeferencing old maps

Universiteitsbibliotheek Utrecht
Bijzondere Collecties

Universiteit Utrecht

HOME HIGHLIGHTS KEY TOPICS ABOUT SPECIAL COLLECTIONS WHERE TO FIND?

Georeferencing

Georeferencing allows you to overlay historic maps on modern maps or other historic maps. The overlaid maps
analysis and discovery. With georeferencing Utrecht University Library wants to give especially research and ec
maps.

For georeferencing use is made of the innovative software of Georeferencer, version 4. Features in this version
Grid view to compare multiple maps, Swipe, Spy Glass, and built in 3D viewer), Transcribe and GeoEditors, anc
in own GIS applications.

Type: contributory: data collection

Citizen Science example: OpenSNP

Do you provide data to a company, or make them openly available?

Academic social networks

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https://tinyurl.com/summerschoolopenscience

Researcher profiles & ASN's

How can ASN's and researcher profiles help the open researcher?

- Make it easy to share output openly
- Make it easy to showcase output
- Make it easy to discuss output openly
- Reach (multidisciplinary audiences)
- Reach audiences beyond academia
- Lower thresholds for collaboration
- Support getting help from colleagues
- Help realize a scholarly commons
- Increase effectiveness in advocacy for OA/OD/OS
- Make information about the scholars, their network and their discussions open, FAIR and citable
- Help breakdown economic, language and geographical barriers to participation

Multiphase tools - different perspectives

	preparation			discovery						analysis			writing				publication									outreach		assessment			
	project management	research priorities	fund / get contract	search	get access	alerts	reference management	read / view	annotate/tag	experiment/ collect data	notebooks / protocols	analyze	visualize	write (+ code)	cite	translate	share code	share data / video	share publications	share posters	share presentations	present	peer review (pre-pub)	select journal	publish	outreach	profiling & network	comment	peer review (post-pub)	measure impact	assess researcher(s)
A				✓	✓	✓		✓							✓				✓				✓		✓	✓	✓	✓	✓	✓	✓
M				✓	✓	✓	✓	✓	✓									✓	✓							✓	✓	✓		✓	✓
RG	✓			✓	✓	✓		✓	✓								✓	✓	✓	✓	✓		✓		✓	✓	✓	✓	✓	✓	✓

ORCID

ORCID

ORCID

- Some 50% of researchers already have an ORCID
- ORCID leaves you in control
- ORCID solves author name disambiguation
- ORCID connects output to researchers
- ORCID is machine readable (through API), making it easy for other sites to connect to your output as well and hopefully avoid you having to manually update your output details many times.
- But many researchers have not yet filled it with their details and works/output
- Adding your outputs is semi-automatic, by connecting to archives and search engines
- Example

ORCID INTEGRATIONS

based on: https://orcid.org/organizations/integrators/integration-chart

Twitter tips

- Take part in ongoing discussions but read it all first
- Don’t follow, search!
- Be kind, help people, answer questions without immediate self interest
- Use images
- Tag organizations/people you want to involve
- Structure: fact/quote + opinion/question + tag + link + image
- Timing/time zones
- …

Can you apply this to your workflow?

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For example:

(Academic) social networks

- How do you want to use social networks for your research?
- Create and fill your ORCID profile

Citizen Science

- Can you include citizen science in your (next) project ?

Who is your audience ?

NANOREG

A common European approach to the regulatory testing of nanomaterials

policy makers?

children?

The New York Times | SCIENCE

SCIENCE

In Search of the Perfect Hair Dye

A study by Northwestern researchers reports that a form of graphene can be used as a less harmful hair color.

Trilobites

By SHEILA KAPLAN MARCH 16, 2018

journalists?

teachers?

Reaching out

video

twitter

blogging

Selam G. '18
Course 2A-Robotics

Hello! ᎣᏏᏲ! 你好! Diggoo!

I began this blogging adventure my freshman year, over IAP 2015. I'm now a Senior, Course 2A-CIR (Mechanical Engineering with Robotics). I am from a lot of different places, but physically speaking, I've lived my whole life in Colorful Colorado. Another place I...
read more »

Why Is There No Water?

posted in: Miscellaneous

A lot of people living in the United States don't understand how complicated water is. I created this post as a sort of quick-guide to water, and the complexity of getting water to places that don't have it.

I was inspired to write this post by a tumblr question I received while in Ethiopia this summer. I feel like it pretty much embodies all the questions I've ever been asked about the water project that I've been working on (you can read more about that here if you want!)

Anonymous said:

Why is there no water in Muti? (Not "how is that even possible?" but "what has prevented Muti from getting water / caused other efforts to fail thus far?".)

For context, Muti is the village in Kaffa, Ethiopia where I've been doing the water project.

Let's break down this question into a few topics. First, what does "no water" mean? Second, what about natural water options such as rain, streams, and rivers? Third, how do people "get" water? And lastly, this question wasn't asked, why is it important to have water?

school projects

Format suggestions

Tweet (series)

Blog post

Manifesto

IRL Debate

Lab meeting

app/extension

Set up community

Wikipedia article

Talk to MP

Podcast

Paper

….

Flash mob

….

Lesson

Serious game

Animated sketch

Poster

Vlog

Poll

Brown bag meeting

Workshop

Lecture

….

Stickers

Meme

Poem

Hackathon

Art

Conference session

Email signature

Cartoon

MOOC

Call for action

Seminar/symposium

Plan your own outreach activity

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Think about…

- **Topic** (either an aspect of your research or an aspect of open science)
- **Audience(s)**
- **Goal**

Plan your own outreach activity

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- Write down topic, audience, goal (10 minutes)
- Discuss in groups of 3 (15 minutes)
- Merry-go-round to source ideas for format (15 minutes)
- Decide on format; flesh out content (45 minutes)
  (sketch / outline / create / write / search partners
- List enabling actions/context (15 minutes)
- Present (5 minutes each)

Open Science and Scholarship

Changing your research workflow

Bianca Kramer & Jeroen Bosman, Utrecht University Library

August 26-30, 2019

Universiteit Utrecht

@MsPhelps
@jeroenbosman

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ASSESSMENT

Assessment:

- Comment / peer review
- Determine impact of research output
- Determine impact of researchers

Open Science practices

Open science practices - activity

- On the side table, you find a selection of open science practices for this specific activity group

- Discuss these with each other:
  - Is it clear what is meant? Ask for clarification if needed
  - Which practice(s) would be *realistic* for researchers*?*
  - Which practice(s) would have high *impact* for open science?

- Choose the practice you think is most promising/interesting, and hang it on the window.

Topics highlighted in this session

Assessment

- Open science in research evaluation
- (Alt)metrics for research objects
- Open peer review, PPPR

Open science in research evaluation

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By Romana Klee CC BY-SA 3.0

Evaluations look at research quality and societal relevance

vsnu

Standard Evaluation Protocol
2015 – 2021

Protocol for Research Assessments in the Netherlands

Amended version, 2016

1 Research quality

The committee assesses the quality of the unit's research and the contribution that research makes to the body of scientific knowledge. The committee also assesses the scale of the unit's research results (scientific publications, instruments and infrastructure developed by the unit, and other contributions to science).

2 Relevance to society

The committee assesses the quality, scale and relevance of contributions targeting specific economic, social or cultural target groups, of advisory reports for policy, of contributions to public debates, and so on. The point is to assess contributions in areas that the research unit has itself designated as target areas.

Evaluations look at research quality and societal relevance

European Commission

- Open Access (& business models)
- Open data
- European Open Science Cloud
- Altmetrics
- Rewards
- Research integrity
- Education and skills
- Citizen science

nationaal plan open science

- Full open access to publications
- Research data suitable for reuse
- Recognition and rewards
- Promotion and support
- Citizen science

Universiteit Utrecht

- Open access to publications
- Open and FAIR research data
- Sharing code and software
- Outreach and public engagement
- Rewards and incentives

KNAW, NWO and ZonMw to sign DORA declaration

‹ List of news

18 April 2019

KNAW (Royal Netherlands Academy of Arts and Sciences), NWO (Netherlands Organisation for Scientific Research) and ZonMw (Netherlands Organisation for Health Research and Development) will sign the San Francisco Declaration on Research Assessment (DORA) on 18 April.

- Identify clearly which criteria will be used to evaluate quality
- Remove all references to Journal Impact Factors and the h-index in all call texts and application forms
- Actively inform referees and committee members
- Take other scientific outputs with scientific and/or societal impact into account
- Ask researchers to explain in detail how they are contributing to their scientific field
- Accept preprints as research output
- Explicitly recognise open research practices by applicants in evaluation procedures

DORA

Declaration on Research Assessment (DORA)

San Francisco Declaration on Research Assessment

Do not use journal-based metrics, such as Journal Impact Factors, as a **surrogate measure** of the quality of individual research articles, to assess an individual scientist's contributions, or in hiring, promotion, or funding decisions.

For institutions:

Be explicit about the criteria used to reach hiring, tenure, and promotion decisions, clearly highlighting, especially for early-stage investigators, that the **scientific content of a paper is much more important than publication metrics** or the identity of the journal in which it was published.

For the purposes of research assessment, **consider** the value and impact of **all research outputs** (including datasets and software) in addition to research publications, and **consider a broad range of impact measures** including qualitative indicators of research impact, such as influence on policy and practice.

DORA

https://sfdora.org/good-practices

Leiden manifesto

1. Quantitative evaluation should support qualitative, expert assessment.
2. Measure performance against the research missions of the institution, group or researcher.
3. Protect excellence in locally relevant research.
4. Keep data collection and analytical processes open, transparent and simple.
5. Allow those evaluated to verify data and analysis.
6. Account for variation by field in publication and citation practices.
7. Base assessment of individual researchers on a qualitative judgement of their portfolio.
8. Avoid misplaced concreteness and false precision.
9. Recognize the systemic effects of assessment and indicators.
10. Scrutinize indicators regularly and update them.

LEIDEN MANIFESTO FOR RESEARCH METRICS

Open science in research evaluation: 3 models

- **judging on rigour, not novelty**
- **accepting diversity in contributions**
- **accepting diversity in impact**

Sanli Faez @sanli · Apr 13

Twitter friends, @DORAssessment and I need your help to compile a list of case-based questions to verify if an institution written/unwritten policies are compliant with #sfDORA recommendation. Please reply or add them to this open doc docs.google.com/document/d/1Qs... RT much appreciated

Sanli Faez @sanli · Apr 13

Example:
In an internal document, my faculty declares “an h-index of at least 17 with an average increase of 1.5 in academic research experience per year” as required competence for senior assistant professor. Is this compliant with #sfDORA?

3 2

Sanli Faez @sanli · Apr 13

Example: One qualification necessary for promotion to associate professor, according to a circulating faculty document, is "An average of 1 high-impact publication per 1.5 years of academic research experience." Is this criterion in conflict with #sfDORA recommendations?

2 1

Sanli Faez @sanli · Apr 13

Example: For highlighting in the institute newsletter, the guideline is: "let us know if you wish to showcase any of your recent high-impact papers (IF≥7, i.e. top 5% of all journals in the ISI categories xx and xx". Does this guideline follow @DORAssessment recommendations?

2 1

UU Open Science programme

Communication
Monitoring
Support

- awards, events
- copyright expertise
- support researcher initiatives
- participate (inter)nationally
- sharing OS efforts
- full OS monitor
- training & workshop programme
- securing results in organization
- avoiding redundancy

We already have:

- OA/IP/RDM portals
- ORCID member

UU Open Science programme

Frank Miedema appointed as Chairman of Open Science Platform

Implementation:

- Appoint chair of the OS-platform
- Creating platform & further governance structure
- Getting support of faculties
- Communication
- Defining work packages & projects

UU Open Science Programme 2019-2021

We already have:

- VSNU DORA signature
- altmetrics trial
- look at non-trad. outputs in CRIS

(Alt)metrics for research objects

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Dissemination: classic versus open

Where will I publish, with a strategy for maximum ‘impact’ based on IFs or publisher brand

versus

When and how will I release/share, with a strategy based on early interaction, collaboration and societal impact

I am not my h-index (or my JIFs)

Key

1. Important discovery - now in textbooks
2. Important discovery - major pharma interest
3. Important discovery - textbooks revised
4. Valuable negative result & UG student training
5. Impactful policy paper (>23k PDF downloads)
6. Much discussed history and policy paper
7. See how much the h-index *doesn't* count

Imperial College London

Stephen Curry

June 2018

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Skewness citations: citations in 2015 to papers from 2013-2014

source: Larivière et al. 2016

Metrics for research assessment

Journals as a whole

- Impact factor, 5-year impact factor
- SJR (SCImago Journal Rank)
- SNIP, IPP, Eigenfactor
- Journal CiteScore (Scopus)
- Google Scholar Metrics

Researchers

- H-index, h5-index

Books

- Book citation index (Thomson Reuters)
- BookMetrics (Springer)
- Google Scholar
- Availability in libraries

Articles – scholarly usage

- Citations (e.g. from WoS, Scopus or Google Scholar)
- Citation benchmark (e.g. from Scopus)
- Views (abstract), Views/downloads (full text)
- Imports in Mendeley/CiteUlike

Articles – broader usage

- Policy documents / technical documents
- Wikipedia
- Newspapers/media
- Blogs, Reddit
- Tweets
- Facebook, Google+

Non-metric / narrative assessment

- Peer review
- Expert opinion

altmetrics

Altmetrics

Assess societal impact (newspapers, reports, blogs, policy guidelines etc.) and connect with your ‘users’, evaluate your outreach

altmetrics: **sources** monitored for mentions of research **outputs**

Monitored sources:

- Publications, e.g.
  - Newspapers/media
  - Reports / policy docs
  - Wikipedia
  - Patents
- Social media, e.g.
  - Twitter
  - Facebook
  - Reddit
  - Blogs
- Other, e.g.
  - Video
  - Library holdings
  - Ref. software
  - Coding sites

Automatically recognized by way of:

- IDs (DOI, ISBN, PMID, URN, Handle, URL etc.)
- Free text search for titles etc.

Mentions of …

- Outputs
  - Papers
  - Books
  - Preprints
  - Posters
  - Presentations
  - Images
  - Datasets
  - Code/software

Possibility for aggregation at researcher/institutional level

Qualitative and quantitative

Altmetric example

Altmetrics providers, displays, background

providers:

also integrated in:

- Scopus (Plum)
- Dimensions (Altmetric)

background & overview:

Altmetrics – yes, but ...

- Not all research output can be traced
- Not all usage can be traced
- How robust and reliable are the data ?
- It’s not the number, but the story that’s important

Goals of assessment?

- **control**: have you reached targets?
- **selection**: who will get money, promotion
- **ranking**: support competitive approach?

or (also):

- **enrich insights** into relevance/use of own output
- **provide links** to unknown users/stakeholders, potential collaborators
- **inform and support choices** during projects and in new project prep.

Summative or formative ?

Open peer review and PPPR

Monday	Tuesday	Wednesday	Thursday	Friday
Introduction	**Discovery**	**Writing**	**Outreach**	**Assessment**
• Introduction to OS & workflow model • Motivations & barriers • Cultural & disciplinary differences	• Searching for (OA) literature & data • Getting access • Open annotation/curation	• Collaborative writing • Plain language explanations/writing • Contributorship roles	• Defining your audience • Academic social networks • OA/OS advocacy	• Altmetrics for research objects • Narrative assessment • Open commenting • Open peer review, PPPR
Preparation	**Analysis**	**Publication**	**Outreach (cont'd)**	**Wrap-up**
• Funding • Publication strategy • Citizen science	• Documenting steps • Collaborating on code and documents • Replication and reproducibility	• CC-licenses and copyright • Preprints • Journal types and journal selection	• IR: outreach actions	• Motivations and barriers • Concrete actions, next steps • What did you miss & how to cover that

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Opinions abound…

Peer review models – dimensions of change

Peer review timeline

2016: ScienceOpen

Introduces option to peer review "any" paper

Introduces open PR process

History of journal peer review (short video)

History of Journal Peer Review on Vimeo

https://vimeo.com › Mark Hooper › Videos

An animated **history of journal peer review**. QUT Office of Research Ethics & Integrity and ... **History of** ...

https://vimeo.com/216091379

Open peer review survey

- OPR is already mainstream
- 76.2% have practical experience
- 60% believe OPR should be common practice
- Positive reactions to most OPR traits (esp. open interaction, reports, participation)
- However, strong rejection of open identities (47.7% against)

Ross-Hellauer T, Deppe A, Schmidt B (2017) Survey on open peer review: Attitudes and experience amongst editors, authors and reviewers. PLoS ONE 12(12): e0189311. https://doi.org/10.1371/journal.pone.0189311

This slide based on Ross-Hellauer 2018: Open peer review, how and why. CC-BY

A life cycle model of peer review - limited

A life cycle model of peer review - enhanced

A life cycle model of peer review - quality

Doing open peer review

1. **Understand** what kind of open peer review you're dealing with
2. Be **respectful**, constructive and clear in your criticisms and responses to criticism
3. Open peer review facilitates **wider discussion**
4. Use open peer review reports to **learn**
5. There is always **room to practice** open peer review even if it hasn't been formally introduced

This slide based on Ross-Hellauer 2018: Open peer review, how and why. CC-BY

Can you apply this to your workflow?

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Preparation	**Analysis**	**Publication**	**Outreach (cont'd)**	**Wrap-up**
• Funding • Publication strategy • Citizen science	• Documenting steps • Collaborating on code and documents • Replication and reproducibility	• CC-licenses and copyright • Preprints • Journal types and journal selection	• Plan outreach actions	• Motivations and barriers • Concrete actions, next steps • What did you miss & how to cover that

For example:

(Alt)metrics for research objects

- Look at the altmetrics details for your papers. Are they informative?

Open peer review / PPPR

- How is peer review organized in your discipline?
- What changes in the peer review system do you think are feasible in your discipline?
- Look at some open peer review reports. Are they informatieve?

Open Science in research evaluation

- Check the evaluation criteria of your own department.
  Are impact factors mentioned?

Check the altmetrics of one of your own (lab's) papers

1. Search Dimensions for a paper

2. On that page, click the Altmetric coloured donut

3. Explore the tabs: what type of mentions, by whom, what do they write?

… or explore altmetrics through one of the papers below

1. Click on a title below to access a paper with altmetric links via Dimensions
2. On that page, click the Altmetric coloured donut
3. Explore the tabs: what type of mentions, by whom, what do they write?

- Klionsky: Guidelines for the use and interpretation ...
- Hess: E-cigarettes as a source ...
- Boeringer: Impact of Video Laryngoscopy ...
- 1 Lopez-Fernandex: Mobile gaming ...
- Mathieson: Genomic history of Southeastern ...
- Galov: First evidence of hybridization ...
- Royet: Neural basis of disgust for cheese
- Farnham: Early career researchers want open science
- Bagnardi: Light alcohol drinking and cancer
- Garrett: The brain adapts to dishonesty

Open Science and Scholarship
Changing your research workflow

Bianca Kramer & Jeroen Bosman, Utrecht University Library

August 26-30, 2019

Universiteit Utrecht

@MsPhelps
@jeroenbosman

CC BY

Wrap-up

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Open Science practices

Open Science practices - your choices

- In the research workflow we created on the windows, mark the practices you would like to start doing (more) if possible (red dots)

- For one (or more) of these practices, try (after the course) to find an example of someone doing this at UU/UMCU and/or in your own discipline

- You will also have the opportunity to ask 1:1 questions on any topic of the course or Open Science in general (e.g. on the availability of tools/platforms, anything that's unclear, etc)

Open Science practices - your choices

Open Science practices - your choices

Open Science practices - your choices

You can make your workflow more open by …

- adding alternative evaluation, e.g. with altmetrics
- communicating through social media, e.g. Twitter
- sharing posters & presentations, e.g. at FigShare
- using open licenses, e.g. CC0 or CC-BY
- publishing open access, ‘green’ or ‘gold’
- using open peer review e.g. at Peerage of Science
- sharing preprints, e.g. at arXiv, bioRxiv or OSF
- using actionable formats, e.g. with Jupyter
- open XML-drafting e.g. at Overleaf or Authorea
- sharing protocols & workfl. e.g. at MyExperiment
- sharing notebooks e.g. at OpenNotebookScience
- sharing code e.g. at GitHub with GNU license
- sharing data, e.g. at Zenodo, Dryad, Dataverse
- pre-registering, e.g. at OSF or AsPredicted
- commenting openly, e.g. with Hypothes.is
- using shared reference libraries, e.g. with Zotero
- sharing (grant) proposals, e.g. at RIO

Barriers and motivations to open science

Motivations and barriers

- Individually, think of what motivations and barriers to open science exist for you (10 minutes)

- Bringing the results together, we will discuss and try to structure and organize them (10 minutes)

- Collectively, we will write a narrative reflecting the group's view on motivations and barriers to open science (40 minutes)

Barriers and motivations to open science

- assessment criteria
- institutional policies/culture
- PI demands
- learning curves
- agreements with collaborators
- uncertainty over effects & legitimacy

- political support at (inter)national level
- pressure from funders
- public stance on Open Science by institution
- user-friendly and powerful tools
- interoperability
- role models
- attention for positive effects

Why would you do this?

Because you have to, sometimes:

- Funder mandates & requirements for open access
- Funder and journal mandates for open data
- Institutional and national open science policies

Because it delivers and feels good:

- Increase societal impact, help solve problems
- Getting more feedback and improve based on that
- Finding co-authors
- Receiving more citations with OA and tweeted pubs

But what about…..?

- "High impact journals" role in evaluation
- Impact factors?
- APC Open Access costs?
- The "version of record"?
- Scooping

- Many universities / funders signed DORA
- Impact factors very flawed
- APCs redressed by funders, sometimes nationally; green Open Access
- Too limited, we need smart/stable linking
- Is that happening? Should we foster it?

Developments towards good, open and efficient research

Slow, difficult
Debunking impact factor thinking
Debunking data scooping myth
Changing version of record thinking

Fast, smooth, easy
Preprint adoption by publishers & researchers
Data management policies at funders
ORCID adoption

Next steps

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UU Open Science programme

Communication
Monitoring
Support

- awards, events
- copyright expertise
- support researcher initiatives
- participate (inter)nationally
- sharing OS efforts
- full OS monitor
- training & workshop programme
- securing results in organization
- avoiding redundancy

We already have:

- OA/IP/RDM portals
- ORCID member

UU Open Science programme

Frank Miedema appointed as Chairman of Open Science Platform

Implementation:

- Appoint chair of the OS-platform
- Creating platform & further governance structure
- Getting support of faculties
- Communication
- Defining work packages & projects

Information, support, training, community

[Q&A: Ask Open Science]

[UU RDM support]

[UU Copyright Information Office]

[OpenAccess.nl]

[OpenScience Community Utrecht]

[Open Science Programme UU]

[National Plan Open Science]

[Open Science MOOC]

Communities

Join community now!

Join community now!

Join community now!

OpenCon

☐ Join the OpenCon discussion list

Signup

Community Calls

Join our monthly community calls to keep up to date with the work being done around the world to advance Open Access, Open Data, and Open Education.

Upcoming Calls

Community Collaborate

Find collaborators for your project; or browse our community project directory to find an initiative you want to get involved with!

Find collaborators

Community Webcasts

Webcasts will provide a regular opportunity for the community to hear from those leading the charge for Open Access, Open Education, and Open Data.

Find webcasts

More than **4000 participants** have attended OpenCon and **its satellite events.**

Ask Open Science

All Activity | Questions | Unanswered | Tags | Users | Ask a Question

Recent activity

4
0
13 answers
942 views

What can research institutions do to encourage open science?

commented **Jun 12** in Open Science by VictorVenema (44 points)

institutions | incentives | stakeholders

6
0
2 answers
1.3k views

Now that Microsoft has bought GitHub, what alternatives are there?

commented **Jun 5** in Open Science by christian_admin (516 points)

infrastructure | open-data | software | versioning

3
0
1 answer
373 views

What mechanisms exist for researchers to write/edit Wikipedia entries about projects/topics/research they are involved in?

commented **Jun 2** in Open Science by Daniel Mietchen (2.6k points)

wikipedia | researchers | research | communication | outreach

Open Science course materials: MOOC

Open Science course materials: Handbook

Introduction

Open Science Basics

On Learning and Training

Organizational Aspects

Examples and Practical Guidance

Glossary

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Languages

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The Open Science Training Handbook

Help us making the handbook better

Let's run an Open Science training together

How to refer to the handbook

The Authors and the Book Sprint facilitators

Thank you to

Copyright statement

Funding

The Open Science Training Handbook

A group of fourteen authors came together in February 2018 at the TIB (German National Library of Science and Technology) in Hannover to create an open, living handbook on Open Science training.

https://open-science-training-handbook.gitbook.io/book

Research metrics toolkit

and Book Chapters

Software

Facebook: Comments, Likes, and Shares

Faculty of 1000 Prime: FFa, Ratings, Reviews

Field Weighted Citation Impact

Github: Forks, Collaborators, Watchers

Goodreads: Ratings and Reviews

h-index

Journal Acceptance Rate

Journal Impact Factor

Mendeley Readers

Monograph Holdings

Monograph Sales and Ranking

News Mentions

Policy Mentions

Publons Score

Pubpeer Comments

METRICS TOOLKIT

HELPING YOU NAVIGATE THE RESEARCH METRICS LANDSCAPE

FOSTER

USE FOSTER TO:

Access Free Courses

Get Badges

Earn Specialisation

Attend live events

Participate in the community

AVAILABLE LEARNING PATHS

The following are a list of Learning Path that will be soon available on the platform. Please keep in mind that the learning paths and badges described here are work in progress.

The open peer reviewer

The responsible data sharer

The reproducible research practitioner

The open innovator

The open access author

101 innovations in scholarly communications: project overview & examples

Fields:

- Scholarly communication
- Tools for research
- Research practices
- Open Science
- Workflows

Activities:

- Exploration
- Research
- Supporting information
- Advocacy
- Workshops

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Bianca Kramer & Jeroen Bosman
101innovations.wordpress.com

exploration

tools database

global survey

research

workflows

open science

research practices

advocacy

workshops

Reflection

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Thank you all so very much !